

THE MILLING WORLD

AND

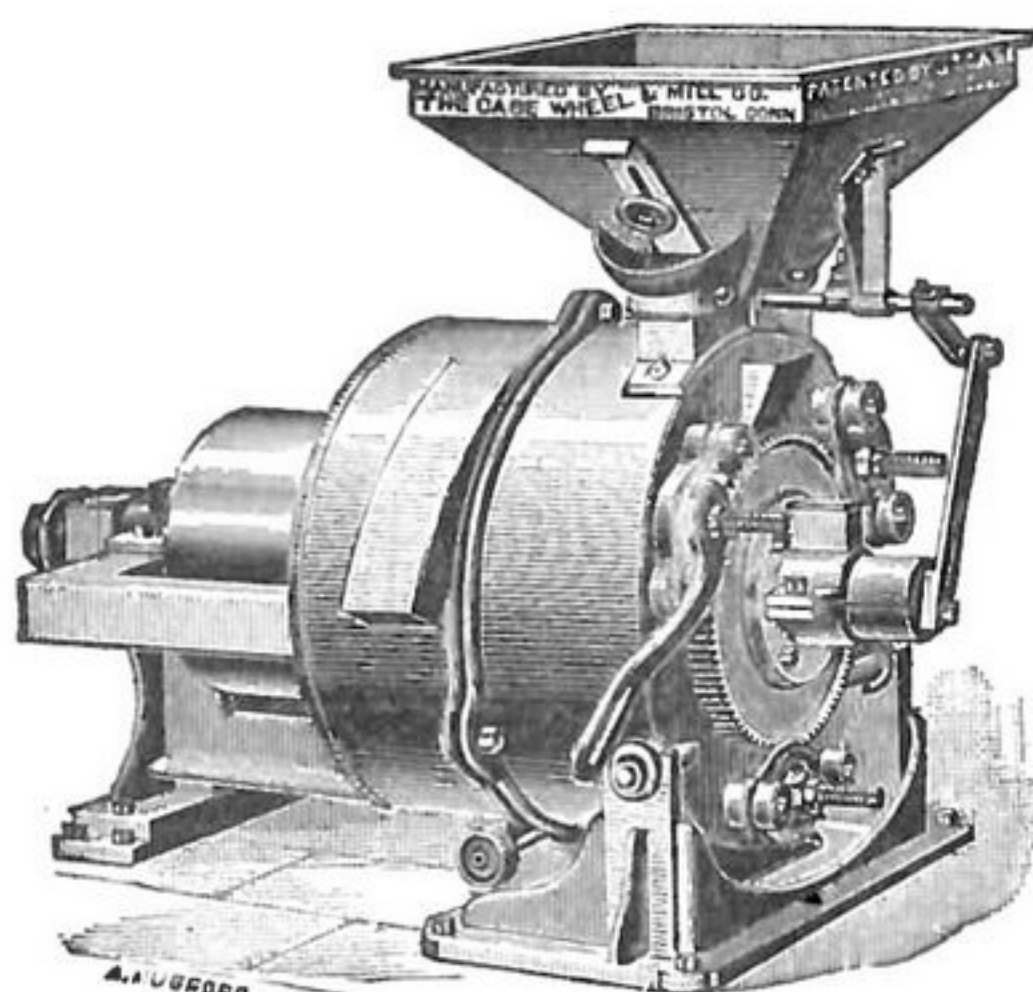
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XXII. No. 7.

BUFFALO, N. Y., APRIL 14, 1890.

\$1.50 PER YEAR.



VICTORY OVER ALL OTHERS. SINGLE & DOUBLE VERTICAL GRINDING MILLS.

(J. T. CASE'S PATENT.)

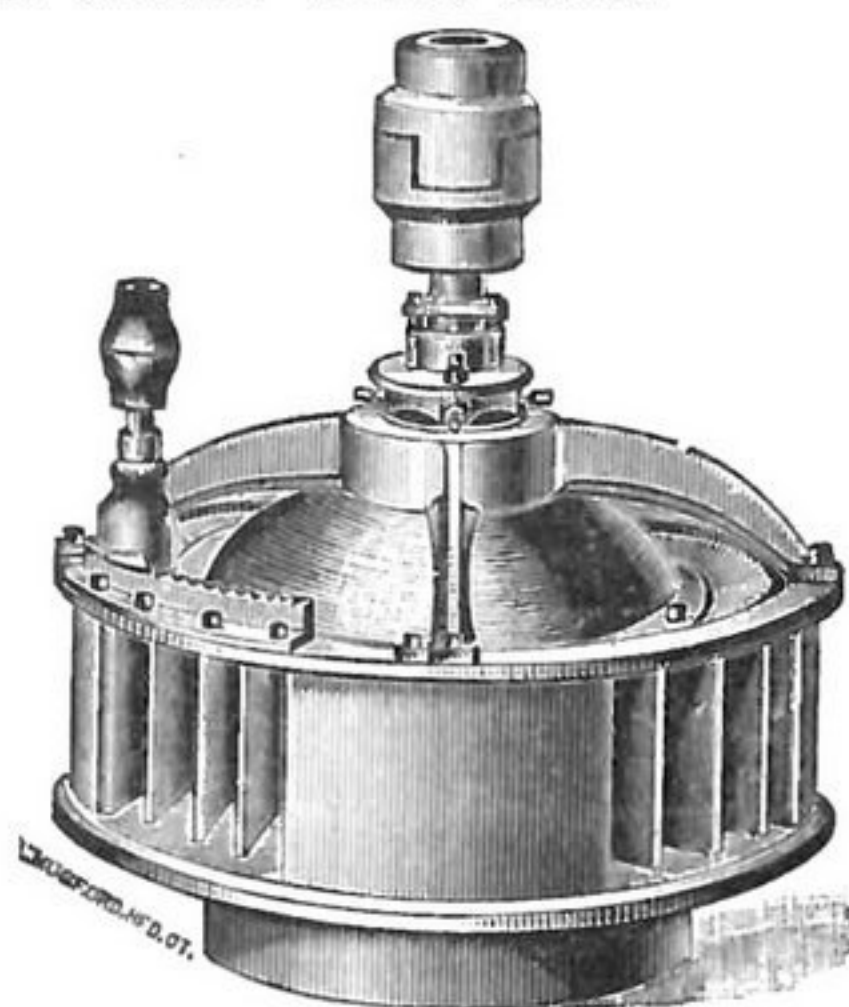
FACTS ARE MIGHTIER THAN ASSERTIONS. READ WHAT THEY SAY:

"Our 20-inch mill made by the Case Wheel & Mill Co. is in every respect satisfactory, easy to handle, and best results obtained of any mill in the country, with same quantity coal and power."—A. S. RUSSELL & Co., Meriden, Conn.
 "Superior to any mill in use."—GEO. WESTON, Bristol, Conn.
 "The best satisfaction in quantity and quality."—CHILD'S ELEVATOR, Manchester, Ct.
 "We take pleasure in recommending it."—GARLAND, LINCOLN & Co., Worcester, Mass.

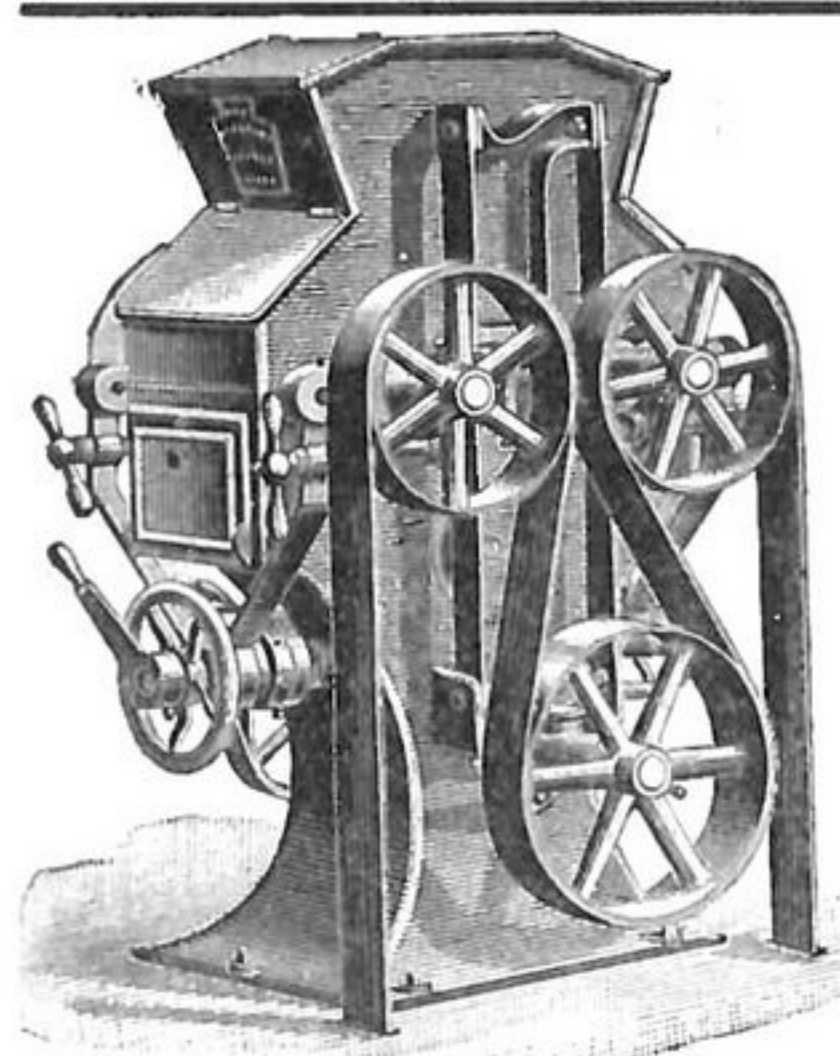
SEND FOR CATALOGUE—ILLUSTRATED AND DESCRIPTIVE.

The Improved National Turbine Water Wheel

The Best for Economy; The Best for Durability; The Best for Power. ONE THOUSAND FIVE HUNDRED NATIONAL WATER WHEELS IN USE Prove that our Assertions are Supported by the Leading Manufacturers in the Country. Send for illustrated catalogue and prices to the manufacturers.



The Case Wheel & Mill Co., Bristol, Conn.



THE "KEYSTONE."

THE J. B. ALLFREE COMPANY, INDIANAPOLIS, IND.

NEW SHARON, IOWA, Feb. 10, 1890.

GENTLEMEN: We have had your mill in operation since November, 1889. It is an 80-barrel mill and put up in splendid style and finish. The *workmanship is perfect*, and in every respect, and all *our machinery runs with the greatest of ease*. Our engine is an "Allfree Automatic," and *it is a "daisy."* It *plays* all day long and takes *but little fuel*. We would sooner have it than a Corliss, and think it is *quite as economical*. Our entire mill outfit is first-class, and is made by *The J. B. Allfree Company, of Indianapolis, Ind.* The *shaker scalper* is a *success*, and *does better work than a reel scalper*, and runs easily with a 3-inch belt.

We wish all intending to build mills could pay us a visit, so that we could show them all the good points of our mill—for to see is to be convinced of its superiority. Our mill does good work, and we can say that we have had *no choke-up* and *no belt to change since we started*. We can *fully recommend the J. B. Allfree machinery* in every respect to millers wishing to build or remodel their mills.

Yours truly,

NEW SHARON MILL CO., R. D. HIGH, Manager.

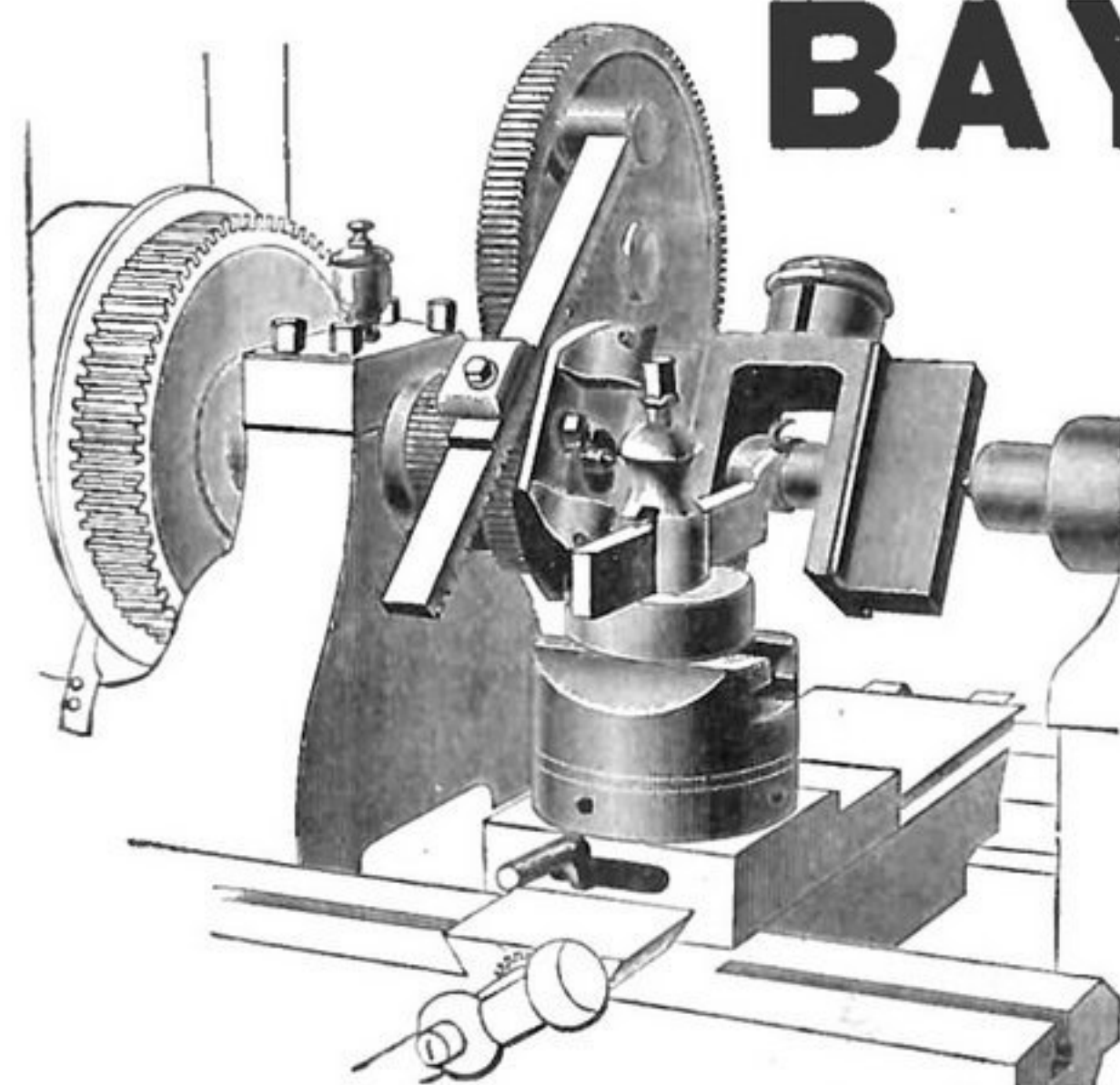
ADDRESS THE J. B. ALLFREE CO., 76 to 86 Shelby Street, INDIANAPOLIS, IND.

BAY STATE IRON WORKS

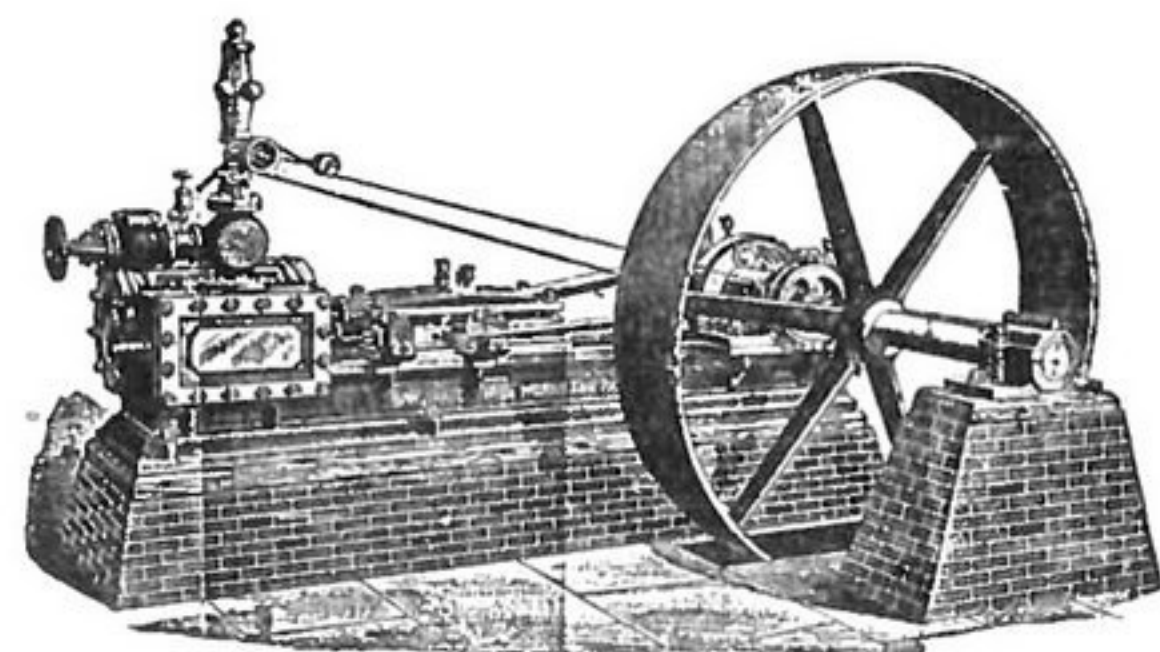
— MANUFACTURERS OF —

Engines, Boilers & Hoisting Machines

Also the Patent Cross-Head Machine and Acme Cube Pipe Tongs. We make either Center or Side Crank Engines, on same bed. Make engines from 5 to 250 Horse-Power. Have over 3,500 Engines and Boilers and over 1,000 Hoisting Machines in use, and all giving good satisfaction. Send for Catalogue and Prices.



PATENT CROSS-HEAD MACHINE.



HORIZONTAL ENGINES.

Noble & Hall, Box 462, Erie, Pa.

OFFICE OF CASE MANUFACTURING COMP'Y COLUMBUS, OHIO.

The Case Roller Mills. Over 14,000 Pairs in Use.

PLEASE READ OUR DESCRIPTION OF THEM, EVERY STATEMENT OF WHICH IS ABSOLUTELY TRUE.

PLEASE READ WHAT MILL OWNERS SAY ABOUT THEM.



The accompanying cut is a correct illustration of our latest improved Four Roller Mill. For fine work, great durability, simplicity, and general excellence, they stand "head and shoulders" above all others.

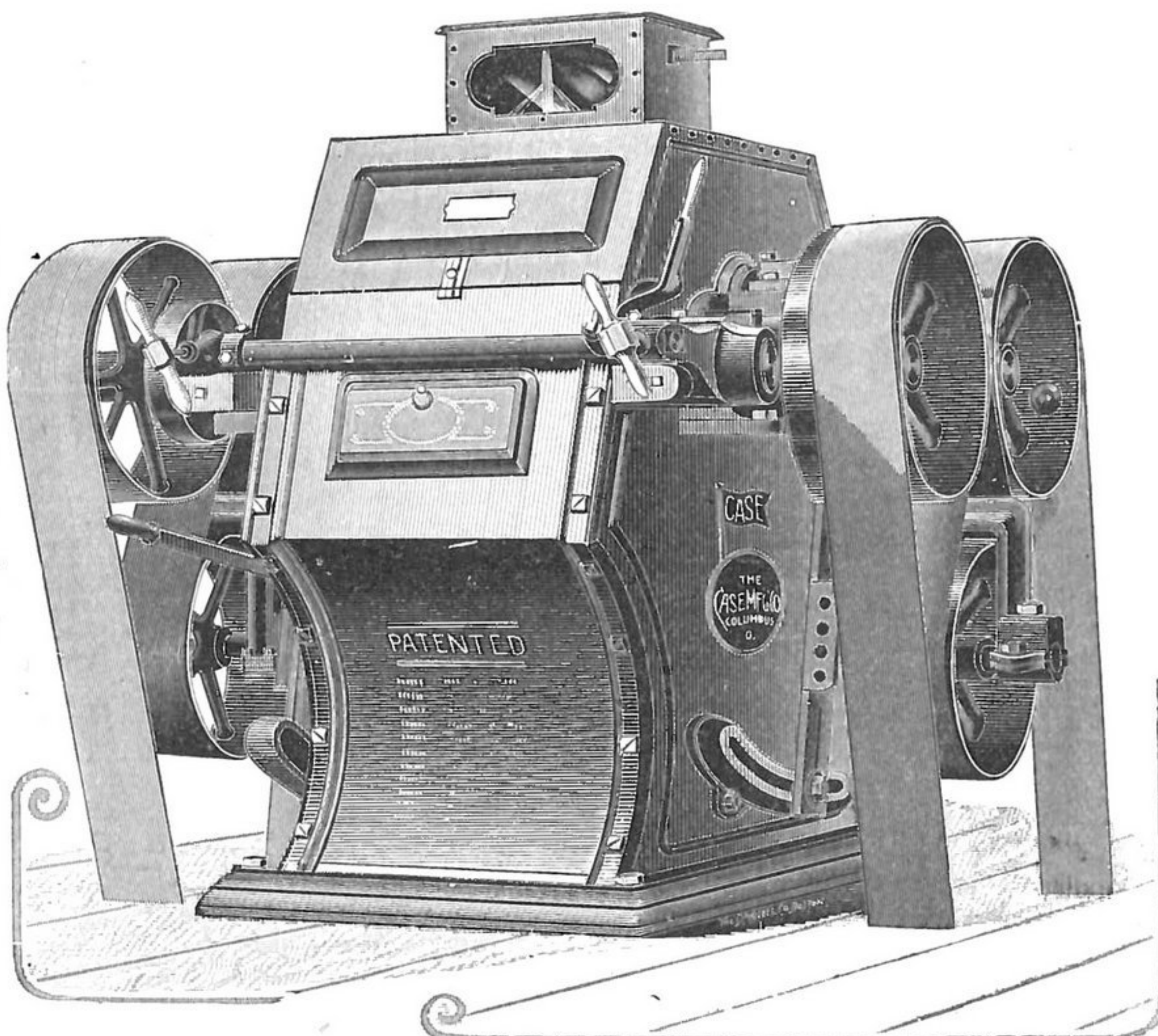
The frame is of iron with a heavy iron base.

The wood-work in top is of select cherry and black walnut, carefully shellacked and varnished.

The handles of adjusting screws and levers are finely nickel plated.

The joints are tight and dustless.

The adjustments easy, simple and perfect.



The roll bearings are wide and finely babbitted.

The belt drive is positive—no little short belts to slip.

The door for examining stock is a great convenience.

The arrangement for leveling rolls, simple and accurate.

The rolls can be thrown apart their entire length by one movement of the lever, and brought back again to original position, requiring no re-setting or experimenting.

Each machine is provided with our AUTOMATIC VIBRATING FEED, which requires no attention, and never fails to spread the feed the entire length of the rolls.



Please Read These Testimonials.

LITCHFIELD MILLING CO., MANUFACTURERS OF FLOUR. }
LITCHFIELD, ILL., Sept. 14, 1889.

Case Manufacturing Co., Columbus, Ohio.

GENTLEMEN: We are in receipt of your favor of the 11th inst., and in reply would say we have twenty CASE AUTOMATIC FEEDS on our Dawson and Allis Rolls, and we are greatly pleased with them. We have tested the Feeds thoroughly on different materials, and find they work as well on bran and germ and other soft materials, as they do on middlings. We have derived great benefit from the use of them, and can cheerfully recommend them to the milling fraternity.

Yours truly,

J. C. EDWARDS, General Manager.

OFFICE OF A. J. MILLER, PROPRIETOR WHITE ROSE MILLS. }
DEALER IN FLOUR, GRAIN AND MILL FEED. }
METAMORA, IND., Nov. 19, 1889.

Case Manufacturing Co., Columbus, Ohio.

GENTLEMEN: Your Feed arrived O. K., and placed it in working order in a very short time. You have furnished me a daisy Feed. After regulating your Feed, it needs no more attention. It pays for itself in one week over the "Roller Feed" in cleaning up the

stock, and also insuring the superiority at same time. I forward you the amount of bill.

Yours truly, A. J. MILLER.

TREZEVANT, TENN., Feb. 27, 1889.

The Case Manufacturing Co.

GENTLEMEN: We have five double stands of Rolls with Roller Feeds on all of them. A short time ago one of your agents induced us to try one of your Automatic Shaker Feeds. We find that it works much better than the Roll Feed, distributing the material the whole length of the Roll. We heartily recommend your feeds to any one wishing to put in new machinery.

Respectfully yours, FUQUA, HARRIS & CO.

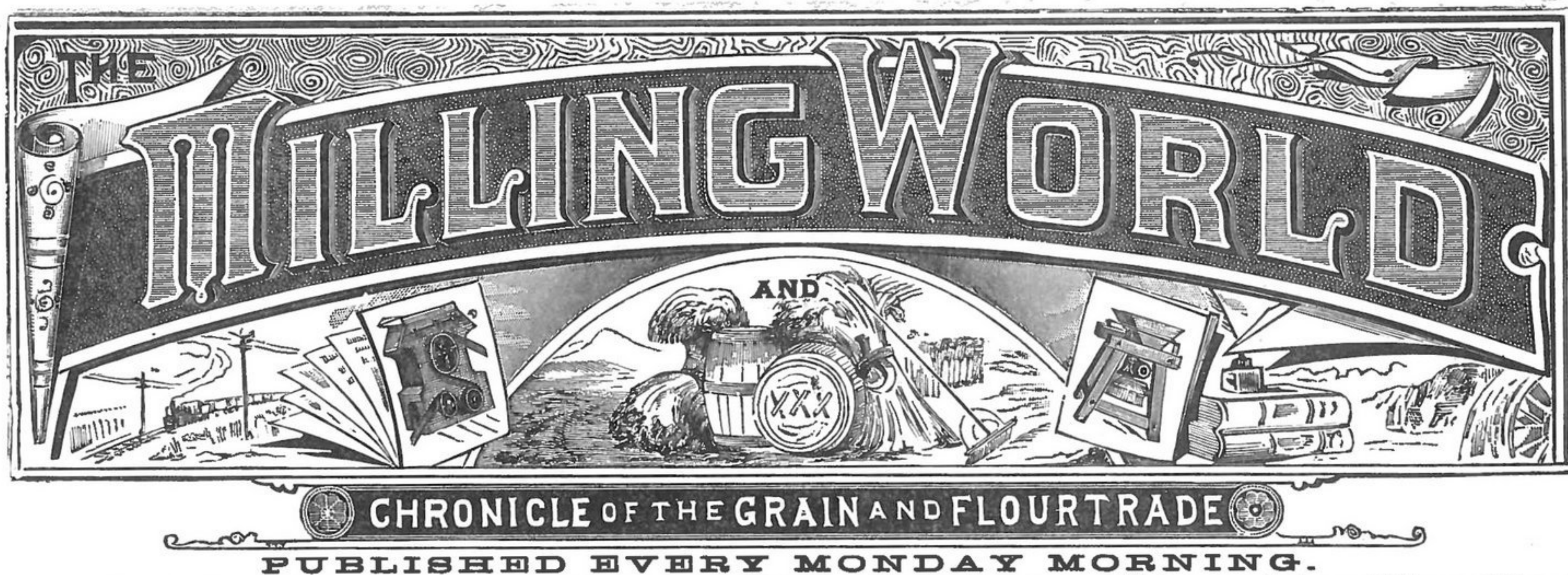
W. C. MANSELD & CO., MERCHANT MILLERS. }
CLEVELAND, TENN., Aug. 29, 1889.

Case Mfg. Co., Columbus, O.

GENTLEMEN: If we were to build a hundred mills, we would not permit any other than the "CASE ROLL" to enter them. They are the best roll on earth.

Yours truly,

W. C. MANSELD & CO.



VOL. XXII. No. 7.

BUFFALO, N. Y., APRIL 14, 1890.

\$1.50 PER YEAR.

BRITISH millers are interested in, if not disturbed by, the announcement that the two leading mill-furnishing houses of Great Britain are about to go into litigation over middlings purifiers. In case the litigation materializes, and in case it affects the millers directly, it ought to be an easy matter for the boomers of the Haggemacher "plansichter" and the Kreiss "gegenflachsichter" to switch the British millers from the purifiers in dispute to those two much-vaunted German machines.

NEWSPAPER reports, inspired by boomers, have attracted a good deal of attention to the Argentine Republic. Plain facts do not confirm the boom reports, and it is certain that affairs in that country are far from being so favorable and so prosperous as they are represented. The immigrants are of the very poorest description, and, having been "assisted" into the country, they feel that they ought to be "assisted" to live by the government. The "great fertility" of the soil is exaggerated, and the "unlimited capacity" for wheat-growing makes a sorry showing at harvest. Gold is at a premium of 150 per cent., wages are low, labor is in small demand and large supply, and Buenos Ayres and other towns are full of paupers. On top of all this, the government goes on, borrowing money wherever it can, planning expenditures on an enormous scale, running up the public and municipal debts, increasing taxes, and in every way possible sowing the wind. Beyond doubt the crop of whirlwind will be on hand, and when the harvest comes everybody will be busied in standing from under.

BRITISH economic writers are beginning to take cognizance of the fact that the United States is increasing its consumption of wheat out of all proportion to its increase in wheat production. They are also beginning to understand that the United Kingdom is far from being the only important market for the wheat surplus of the United States. An article from a London cotemporary, on another page, shows the recognition of these two facts. Of course, our European neighbors, considering only wheat, are likely to fall into error in making up their estimate of the breadstuff capacity of this country. The bald fact that the United States, with 65,000,000 inhabitants, is raising only the same quantity of wheat as when it had 45,000,000 inhabitants, should not be taken as conclusive proof that the climax of wheat-growing in the country is reached. The consumers of the United States are multiplying, but the articles to be consumed are multiplying quite as rapidly. No other land on earth furnishes its inhabitants so varied, so luxuriant and so cheap a bill of fare as the United States. Wheat is only one of a dozen important staples, and, so long as consumers can secure so many articles in the line of cereals, in such abundance, and at so low prices, wheat will occupy a less commanding position than it would occupy were our agricultural resources less varied and less abundant. A country that produces, along with its wheat and other cereals, an enormous supply of fruits, meats and vegetables, naturally places less stress upon any one line than is necessary in a country of restricted resources. English writers, judging

everything in the world by English insular standards, are likely to make mistakes in summing up the situation in a country like the United States, whose products range from wheat to rice in cereals, from apples to figs in fruits, and from cabbages to the most tropical of tropicals in vegetables. Before pointing out the probability of the United States becoming a second-class wheat and wheat-flour exporter, through the increase of home consumption coupled with non-increase of production, our transatlantic prophets should thoroughly inform themselves concerning the real capacity of our wheat area under intense culture, and our ability to spare, in emergencies, wheat for export, which, under ordinary market conditions, would be consumed at home. British writers should compute our capacity ultimately, not upon our present methods of agriculture, yielding from 12 to 20 bushels of wheat to the acre, but upon the methods that will prevail as population becomes denser and the demands for wheat grow larger. Let them compute what would be our capacity for wheat production, even on our present acreage, with the "average" raised from 12 to 20 bushels to the acre. Let them compute on an increase to 30 bushels, under intense culture. Let them not forget that, in spite of all the loose assertions to the contrary, there are still immense areas of fine spring and winter wheat land in the United States, upon which no seed has yet been sowed. In theory the "land is taken up." In practice it is yet untilled in large areas that do not really exercise any influence upon aggregate production. Great Britain may for years continue to draw from the United States all the fine wheat she needs. It will be many years before she shall be forced to rely upon the broken reeds of India, Russia, and Australia.

MANY of the correspondents of agricultural journals, following the lead of the grain-gamblers, are calling for the abolition of the monthly crop reports sent out by Statistician Dodge of the Agricultural Department. Without giving any reason for the assertion, excepting the unproved statement of the grain-gamblers, these correspondents assert that the Dodge reports are generally wrong. It is certain that the grain-gamblers can not prove that they are wrong, and it is equally certain that these monthly reports have been the means of preventing the gamblers from making prices to suit themselves. Were there no government reports, the gamblers would do just as they pleased in reporting the crops. The "bulls" would divide by four, the "bears" would multiply by four, and the farmers, having no government report to fall back upon, would be between the devil and the deep sea all the time. When the easily-fooled farmers begin to advocate what their worst enemies, the paper-wheat gamblers, advocate, it is time to sound a warning. The gamblers claim that the Dodge reports have erred. Probably that is true, but their erring has never equaled that of the bulls and bears. Moreover, the Dodge reports represent real figures gathered by thousands of correspondents, while the bull and bear figures are always mere frauds, designed to boost or pound the markets for the good of the gamblers. When the farmer lambs and the gambler lions lie down together, the lambs will be inside the lions.

The DAWSON ROLL WORKS CO.

FOUNDERS & MACHINISTS,

—MANUFACTURERS OF THE—

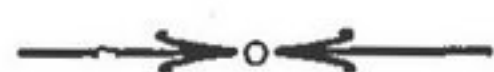
Dawson Roller Mills

—AND FURNISHERS OF—

CHILLED IRON ROLLS

WITH DAWSON PATENT CORRUGATION.

ALL STYLES OF FLOUR MILL ROLLS RE-GROUND AND
RE-CORRUGATED WITH ANY FORM OF CORRUGATION.



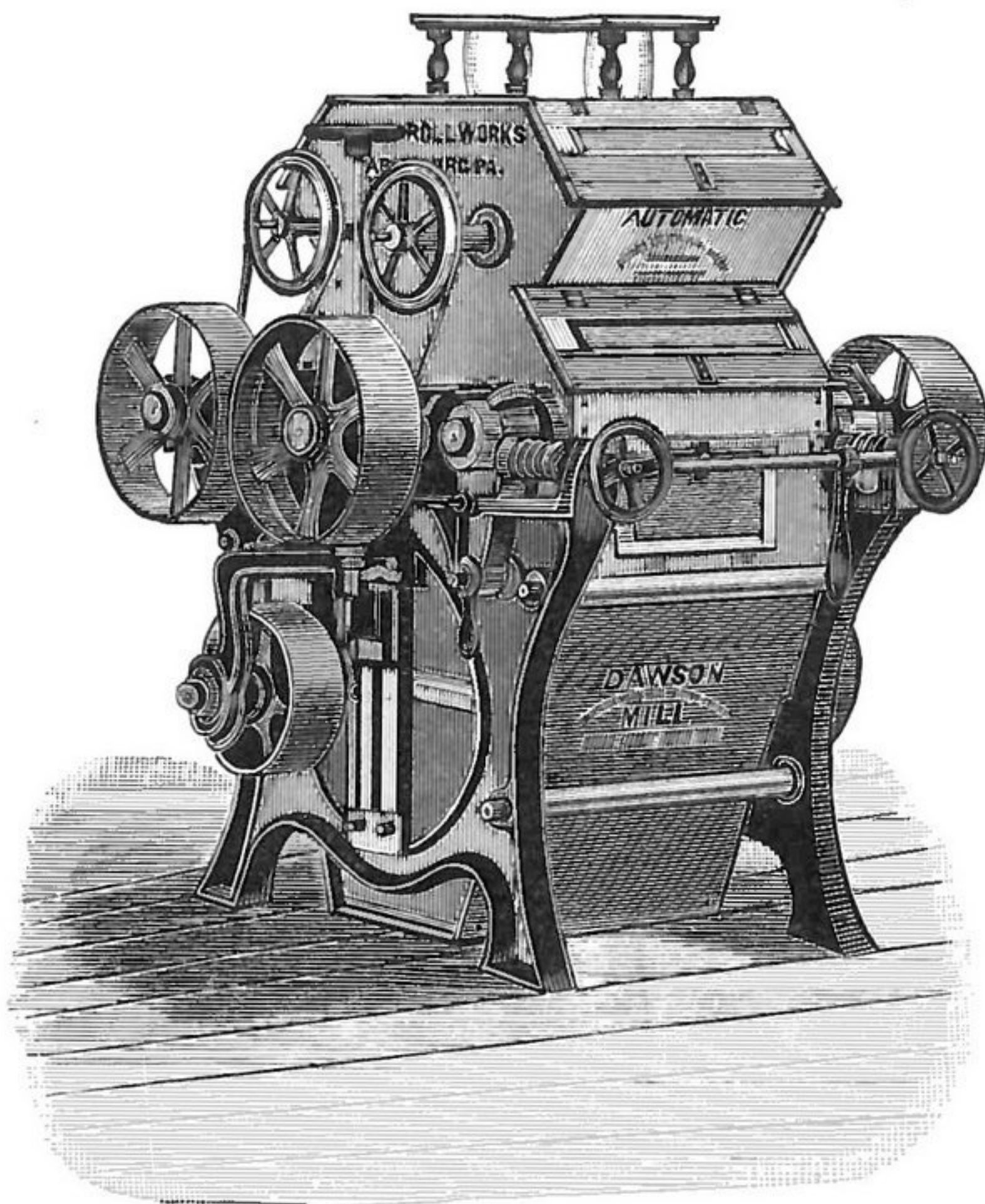
We have had large and extended experience in grinding and corrugating chilled rolls for milling, and have one of the largest and most improved plants in the country for this work, which enables us to meet the most exacting requirements of the trade promptly.

ORDERS AND CORRESPONDENCE SOLICITED.

DAWSON ROLL WORKS CO.

South and Short Streets,

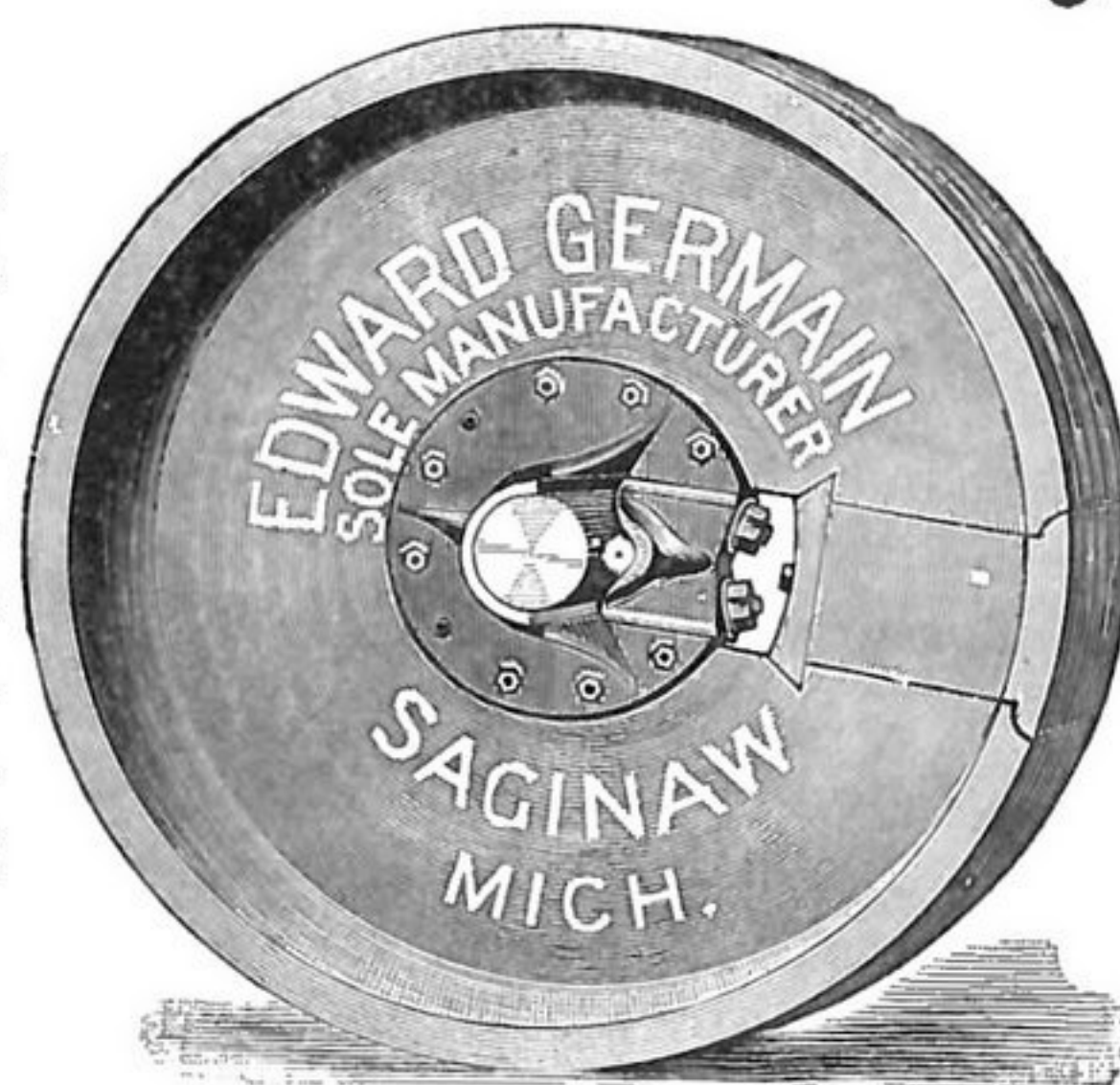
HARRISBURG, PA.



The Cowles "Reliable" Sectional Wood Pulley



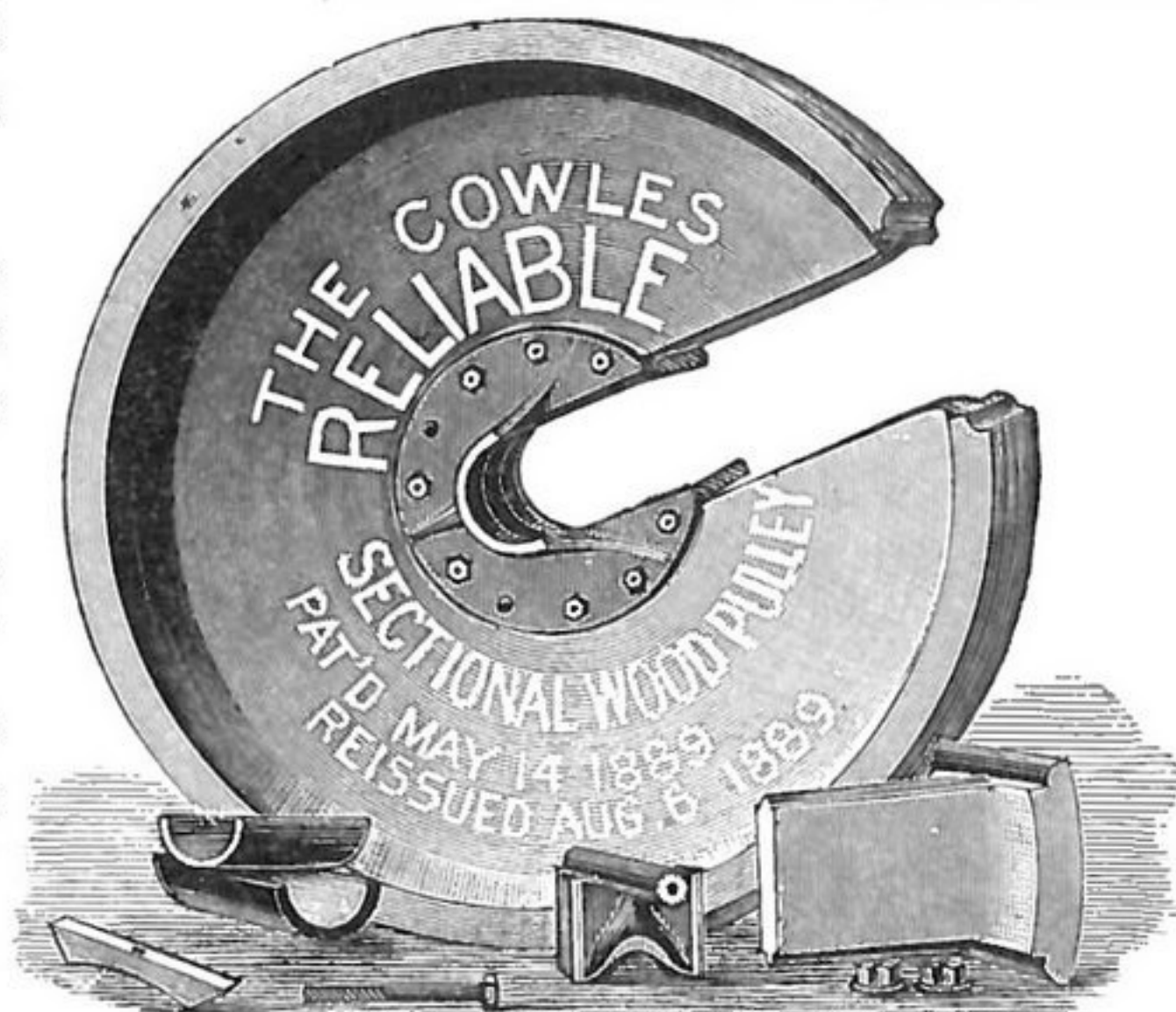
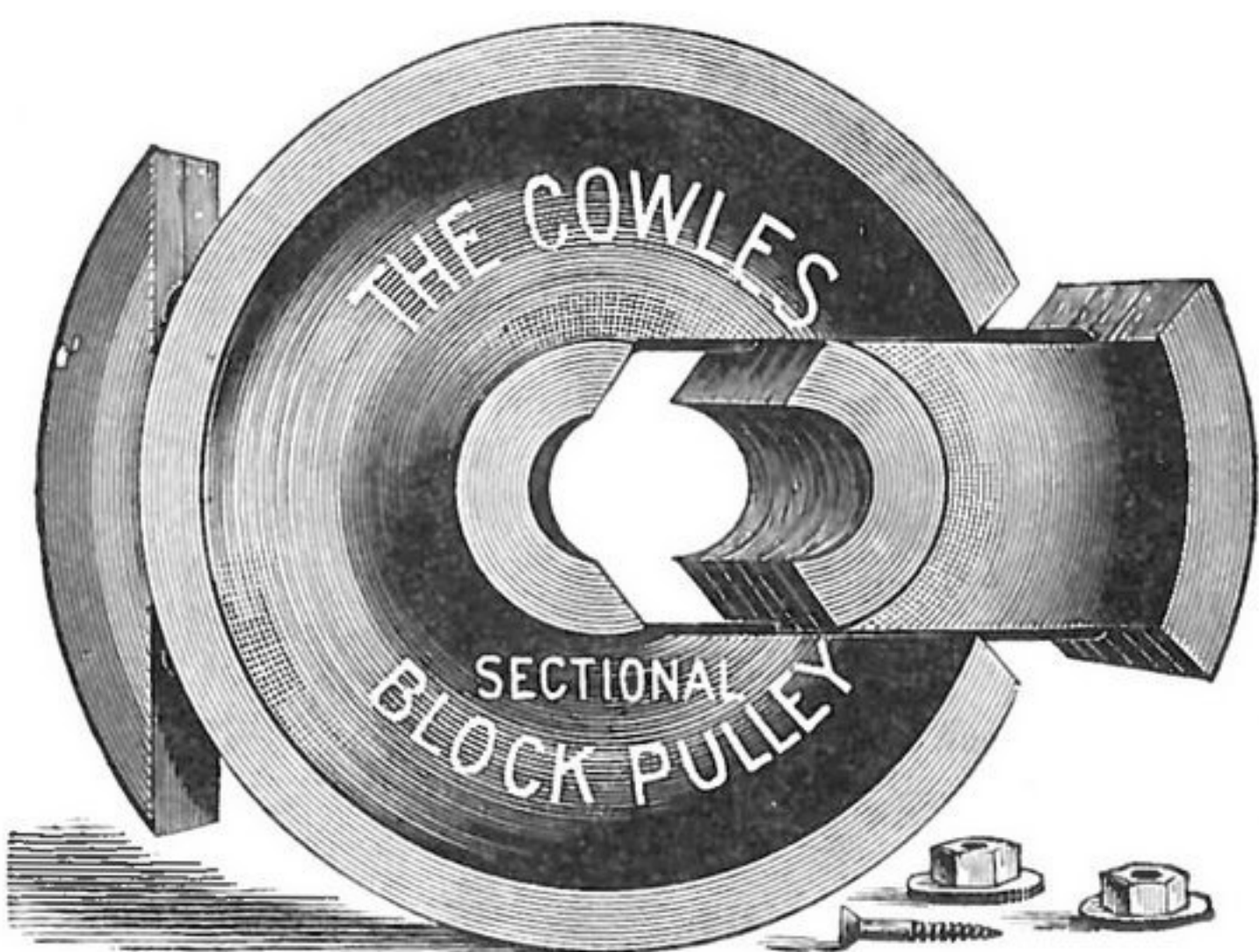
Web made of several layers glued together with grain crossing, and faced up on both sides. Iron flanges securely bolted to web. Rim put on after web has been trued up. Web and rim turned on inside and face, making perfect running pulley. Rim supported entire circumference. Positive self-gripping device for securing pulley to shafting, which is self-centering, and can not slip with wear.



A wooden rim pulley transmits from 30 to 50 per cent. more power with same belt than an iron one.

Two-thirds lighter than iron, bearings will wear longer and the expense for lubricant will be less.

Having solid web, there is no air resistance. The "Reliable" can be placed on shaft or position changed in one-fourth the time required with any other pulley.



EDWARD GERMAIN, SOLE MANUFACTURER SAGINAW, MICH., U.S.A.



PUBLISHED EVERY MONDAY. OFFICES: { Corner Pearl and Seneca Streets,
Over Bank of Attica.
McFAUL & NOLAN, - - - PROPRIETORS.
THOMAS MC FAUL. JAMES NOLAN.

SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in unregistered letter at sender's risk.

To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.

Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

ADVERTISING.

Rates for ordinary advertising made known on application.

Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisements taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.

Orders for new advertisements should reach this office on Friday morning to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.

This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.

Address all communications

THE MILLING WORLD,
BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order. Four consecutive insertions will be given for the price of three.

SITUATION WANTED.

Head miller with over 20 years experience want to make a change this spring. Address, A. MILLER, 67 Weaver Alley Buffalo, N. Y. 4t

WANTED.

A situation to run a 50 to 100-barrel roller mill. Pennsylvania, New York, Ohio and Michigan preferred. Address MILLER, Box 75, Union City, Erie Co., Pa. 36

WANTED.

A situation in some flouring or grist mill, by a man who has had good experience with the buhr system. Can furnish best of references. Address, THOMAS H. NICHOLAS, DeRuyter, N. Y. 811

SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 3 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office 10 cents must be added to pay postage.

FOR SALE.

One new Hominy Mill, capacity 5 to 8 barrels per hour. Address J. C. DIXON, Pocomoke City, Worcester County, Md. 7

WANTED.

The address of Mr. Buhr Miller who was formerly a citizen of Prosperity removed to Adversity, and when last heard from was in Despondency looking for a job. By the will of his uncle Oliver he becomes heir to a modest fortune to obtain which he should address the FLENNIKEN TURBINE COMPANY, Dubuque, Iowa. Administrator. (Exchanges please copy.)

MILL MACHINERY FOR SALE.

One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.
One 20-Inch Under-Runner Portable Mill, French Buhr Stone, capacity 10 to 12 bushels per hour; new, best make.
One 14-Inch Vertical Feed Mill; best make, new, a bargain.
One No. 6 Dustless Separator; new, a bargain.
One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.
Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.
Three No. 1 Corn Shellers, capacity 200 to 300 bushels per hour; new.
One No. 2 Purifier. New. Best make. A bargain.
One 20-Inch Portable Mill.
One 18-Inch Double Gear Portable Mill.
For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf

FOR SALE CHEAP.

One 36-In. Iron Frame Portable Mill, French Burr Stone, Used about 2 months.

One 20-In. Vertical Mill, French Burr Stone, Used about 30 days.

Three Pair 42-In. Old Stock Feed Stones.

FOR PARTICULARS ADDRESS,

SAMUEL CAREY, 17 BROADWAY, NEW YORK.

FOR RENT.

Clinton Mills, at Black Rock, Buffalo, for rent on reasonable terms, recently repaired and put in good order. Apply to CHAS. DANIELS, over 311 Main Street, Buffalo, N. Y. 6tf

FOR SALE.

One-Hundred Barrel Roller Mill, in one of the best winter wheat sections of the country. Wheat brought to the door in wagons, and flour can be shipped in any direction by six railroads and river. Splendid home market, here and in Louisville.

Also a Sixty-Barrel Custom Mill, roller, running full time on custom, and can hardly keep up. Paying well now, but satisfactory reason for selling. Either or both will be sold cheap. J. M. HAINS, New Albany, Ind. 263

If the convention of the Millers' National Association, to be held next June in Minneapolis, pans out as badly as did the convention of 1889, will that organization promise to cease to exist?

THE lard-brained, leaden-headed tacky who mal-edits the St. Louis "Merchant, &c." spells it "villification" and pronounces it "intolerable." He's an amoozin cuss, as Artemus said of the kangaroo, and what does he mean, any way, if he means anything? What is it all about?

OUR esteemed Chicago cotemporary, the "American Miller," refers to the editor of the Minneapolis "Yahoo" as a "conscienceless liar" and a "blackmailer." No one who knows the "Yahoo" thoroughly will feel like denying the severe Chicago impeachment in this instance.

THE March fire-losses in the United States and Canada footed \$8,500,000. The milling and allied industries contributed \$586,000 to that total. The total loss for the first three months of this year is \$25,032,625, against \$30,610,700 in 1889 and \$37,171,600 in 1888. The March loss last year was \$10,912,000, against \$9,919,000 in 1888. This year has started in far better than the past two years.

THE past week saw even the "bears" somewhat startled out of their usual serenity by the numerous bad reports from the winter-wheat regions. Making all due allowance for exaggeration and want of accurate information, it seems probable that the winter-wheat crop has been damaged at least 30 per cent. The damage is placed as high as 50 per cent. in some localities, while in others it is rated at 10 to 20 per cent. Doubtless there will be far less winter wheat harvested in 1890 than in 1889, and probably before the new grain is ready for shipment farmers will be wondering why they ever let wheat go at the rates prevailing since the harvest of 1889.

LATE English reports estimate the exportable surplus of wheat in Australia from this crop at 8,000,000 bushels, and estimates as low as 5,000,000 bushels have been made. This is the "magnificent crop" so much vaunted before harvest! When will American grain growers, dealers and millers awake to the fact that it would be profitable for them to establish statistical agencies in competing countries? When will they conclude that it is expensive folly for them to let their wheat go at prices made by European consumers on gross exaggeration, like that published during the past five months concerning the Australian wheat crop? The British bears have it all their own way, simply because the innocent Americans will not take steps to inform themselves on matters that most intimately concern them.

THE announcement is made that Mr. B. P. Hutchinson, of Chicago, commonly known as "Old Hutch," is preparing to "squeeze" the gamblers who are holding May wheat. Well, if the gamblers are forewarned with the rest of us, and if they persist in getting into the squeezer of "Old Hutch," who's to be blamed when they get "squeezed"? He's trying to "squeeze" them, and they're trying to "squeeze" him, and yet, when the "squeeze" comes, what an ocean of socialistic bosh will be talked by the bummers and fanatics of the sensational daily newspaper! How they'll call for "laws to suppress gambling in foods"! How they'll pity the poor gamblers whom "Old Hutch" squeezes! Meanwhile, the best thing that can happen for the public is to have gambling in grain made dangerous by persons just like "Old Hutch." His "squeezes" will do more than any laws to restrict gambling in cereals.

POINTS IN MILLING.

EVERY day brings its lessons concerning the explosibility of dust. In sugar refineries and confectioneries sugar dust explodes terrifically. In wood-working plants wood dust explodes fatally. In flouring-mills flour dust explodes regularly and ruinously. The lessons are plain, yet millers, sugar workers and wood-workers seem to be unable to remember the danger of the last explosion until the next one impresses it anew upon their mind.

WHAT can I or anybody else say, or do, or write, to impress millers effectively with the dangers that lurk in open lights in dusty mills? My last trip makes me nervous, even to think of it, as I had a surfeit of explosions. In one mill a foreman was showing me a purifier in a dark corner. He lighted a match and thrust it somewhere—I do not know where—for, Zip!! Flim!!! went the dust, and the air, and the foreman; and I tumbled out of the nearest door. I was only scared. The foreman was singed in the face and on the hands, but he stood his ground as coolly as though dust explosions were the regular order of the day in that mill.

I LOST all interest in that purifier, although my business there was to see it. I told the foreman that I would finish the inspection when he had drawn the machine out of doors and wet it down carefully. He said calmly: "O, there's not a bit of danger. Come on! I'll take a lamp this time. That will make it safe."

NOTHING he could say could convince me that a lamp would be much safer than a match in that corner, and that purifier was left alone in its glory. Even an old roadster does not willingly court close acquaintance with a young volcano labeled "middlings-purifier."

WHAT impresses me most is the seeming inability of the men in a mill to appreciate what an explosion means. They seem to be willfully blind, pretending to think that, although dust in other mills may be explosive, that in their own mills is perfectly safe.

I BELIEVE that the time is near when nearly every mill of any importance will be lightest in the safest way, that is, by electric lights. That method of lighting will do away with the use of dangerous naked lights in dusty mills, and it will lessen the number of explosions and fires very greatly.

"BEWARE the dust!" is a motto that should be enforced in every mill. The average miller probably argues that dust, which will not burn when lying in heaps, will not explode when floating in the air. That is their error. Recent investigations show that dust of almost any sort is dangerous when suspended in the air. Wherever the dust reaches a certain stage of diffusion in the air, explosion will occur. In a building full of nooks, corners and confined spaces, with the air full of dust, there may be a score of dangerous spots, that is, spots in which the dust and the air are mingled in the proper proportion to invite explosion.

THE lunatic or the blockhead with the naked light is sure to strike one of these spots with his flame, and the explosion puts in its appearance with business-like promptness. I suggest that every man, who is to handle lights in the mill, be questioned on the subject of dust, air and naked lights. The employer could soon determine whether he knew too much or too little about the dangerous nature of dusty air. The naked-light lunatic is a destructive fiend to be running loose in a mill. He should be looked after.

MILLING PATENTS.

Among the patents granted April 8, 1890, are the following:

Lester A. Gillett, Leonardville, Kan., No. 424,972, an automatic grain-meter, containing the combination of the casing having a contracted neck or upper portion and segmental lower end provided with a discharge-opening, transverse shafts, a vertical partition extending between said shafts, a

cut-off plate upon the upper shaft, a bottom valve upon the lower shaft, comprising two wings or plates, the lower edges of which are a distance apart equal to the width of the discharge-opening, a weighted arm or lever extending from the lower shaft, studs or projections to support said weighted lever, and a belt or band connecting pulleys upon the two shaft.

Henry B. Stevens, Buffalo, N. Y., No. 425,111, a hulling-machine.

Ethan B. Keith, Galesburg, Mich., No. 425,229, a grain-carrier.

John N. Beall, Greenfield, Ill., No. 425,286, a flour bin and sifter.

Martin W. Leonhardt, St. Louis, Mo., No. 425,331, a machine for hulling oats or cotton-seed.

George A. Markham, Coldwater, Mich., No. 425,334, a combined flour bin and sifter.

Gustav A. Buchholz, Frankfort-on-the-Main, Prussia, Germany, Octavius Knight, Washington, D. C., administrator of said Buchholz, deceased, assignor of one-third to James U. Robertson, New York, N. Y., No. 425,366, a grain-reduction machine, containing: 1. The combination, with a frame having suitable guides and a feeding-spout, of a series of vertically-fluted breaking or cracking members of prismatic wedge shape, arranged in a horizontal series, the consecutive members being correspondingly tapered alternately upward and downward, and means for causing the alternate members to reciprocate relatively to the remaining members. 2. The combination of a suitable frame, a series of parallel reciprocating reversely-tapered bars or beams forming breaking or cracking members, a series of parallel vertical guides for said members, having spaces between them wherein said members may be raised or lowered, a connection between all the alternate breaking or cracking members, and means, substantially as described, for adjusting such alternate members simultaneously. 3. The combination of a suitable frame, a series of reciprocating bars or beams, wedge-shaped in vertical section and whose adjacent faces have a series of vertically-downwardly-lessening flutings, a connection between the alternate bars or beams, and a common shaft for operating both connections, raising one set of members and depressing the other set. 4. The combination of a suitable frame, a series of parallel bars or breaking members guided thereon, two counter-shafts connected, respectively, with the alternate members, and a lever on each shaft for operating the same and reciprocating said members synchronously in opposite directions.

MILLS AND WATER RIGHTS.

Few subjects in which mill-owners are interested are susceptible of a greater variety of opinion and discussion than the riparian rights of water-power owners. In cases where several mills or manufacturing establishments are located upon the same stream many intricate and perplexing questions arise concerning the rights and privileges of one over the other. Much litigation has grown out of such cases from time to time, and many decisions of the courts may be found on the records, some of which appear to be somewhat conflicting. There is what may be termed an unwritten law, which is frequently applicable to such cases. This law is founded upon reason, common-sense and equity, and in almost every case which has been taken to the courts of highest resort this principle of law has been sustained.

This unwritten or common law gives to all owners whose lands are situated on each side of a stream a clear title to the center thereof, except such as are navigable; in such cases the state or general government reserves the title to a sufficient portion of the lands under the water to meet the necessities of the public. But on streams that are not navigable the title to the center is vested in the owners of the lands bordering on the same, and, while each owner is clearly vested in such title and has the full and unrestricted right to the use of one half of the water, he has no right whatever so to use it as to divert it from its natural channel, except upon his own lands, or to infringe upon the rights of others, whose lands may be situated below him, but in all cases he

is bound to return the water upon leaving his own premises to the original channel.

In case of a fall so situated, if the owner on one side of the stream chooses to improve the same and use the water upon his own premises for manufacturing purposes, there is nothing in the law or equity to prevent him from erecting a suitable dam across such stream, although a part of the structure must necessarily rest upon the lands under the water of the adjacent owner; but in no case will he be justified in raising the water so as permanently to cover any part of the lands of the adjacent owner above low-water mark, without compensation for the lands so used. In case the water is to be used on both sides of the stream for such purposes, then the owners of the lands adjacent are jointly liable for one-half of the cost for constructing the necessary dam and keeping the same in repair. As each party in such cases is clearly entitled to the use of one-half of the water in the stream, it follows that each may insist upon the water being drawn from the pond at the same level, and the law will not justify either party in making any excavations in the bottom of the pond or in placing any obstructions therein, whereby more than an equal quantity of water may be diverted to one side or the other; and in times of scarcity, when the supply is not amply sufficient for both parties, either party may insist upon a still further accurate division by not only drawing the water from the same level at the pond, but also drawing it through the same-sized aperture. But whenever there is a surplus and water is running over the dam, neither party is bound to observe this rule, but may increase the size of the opening to the full extent of the surplus; but in no case has either party the right so to enlarge his aperture as to draw the water below the level of the dam.

It frequently happens that several mills are located upon the same stream, one below the other, and those below often suffer inconvenience in times of low water from the shutting down of those above, while their ponds are being filled. In ordinary cases it would appear that, while those below may suffer considerable inconvenience at times from this cause, yet from the fact that the water stored in the ponds above may be considered as stored for their benefit as well as the others, no real damage is sustained in consequence. This, however, is not always the case; neither is this rule applicable in all cases. One case will illustrate this. A has a manufacturing establishment situated at the head of a rapids with several mills situated on the same stream below him. A's pond being somewhat more than 3 miles long and covering a large area, in the summer, when the stream was low and the pond drawn down to its lowest point, then when the head-gates were shut down it would require a full week to fill up again. A's wheels used a large quantity of water, and when run to their full capacity they would exhaust the supply in about 3 days. It was his practice to run the works by water exclusively until the pond was exhausted, then shut down and run by steam until the pond filled up.

B had a mill situated below him, with a moderate sized pond, and wheels that used much less water, and when A's works were running by water, he could not use one-half of the flow, and the balance ran over the dam and was lost. B, owning the land on both sides of the stream, brought a suit in equity, claiming that he was entitled to the use of and required all the water that the stream would afford, but by the manner in which A was using it he was practically deprived of the use of a certain part of it. In this case it was held that, although A had the undoubted right to the use of all the water in the stream, yet he only had a reasonable right to its use, and no right to use it in such a manner as materially to damage those below him by holding it back an unreasonable time and then drawing it in such quantities that more than one half flowed over the dams below and was wasted. Such use was held to be practically diverting just so much water from them, and as effectually so as if it had been diverted from them by another channel. While the right of A to fill his pond was admitted, yet the rights of those below him in the use of the same water were such that he had no right to use it to their damage.

It is frequently claimed that those situated at the head of a fall have certain rights and privileges over those below them. Except in peculiar cases this is not the case. For instance, a party owning all the lands on both sides of a stream, both above and below the fall, may construct a dam, and form a pond, and dispose of a certain mill-site, and guarantee the purchasers certain rights in the use of all the water in the stream, should their necessities require it. He may also sell other sites with the privilege of drawing from the same pond, subject to the rights previously granted, and the party purchasing and accepting those conditions, which must be clearly specified in the deed, is bound to submit to those conditions; but other sites located upon lands below them and owned by other parties are in no way bound by such conditions as to the control of the water, but may demand the free and unrestricted use of the natural flow of the stream at all times; while those above them will be held to only a reasonable control of the water at any time.

The courts, in nearly every case where it is shown that water is used in an unreasonable manner or diverted from its natural source to the damage of mill-owners, have promptly awarded damage for the same, and even the State has no legal right to grant the privilege of taking water from such lakes as are under State control, without the consent of the riparian owners of the lands situated upon the outlets thereof. This point has been recently settled by the Court of Appeals in the case known as the Honeoye Millers vs. The City of Rochester. Hemlock Lake is situated in Livingston County, N. Y. Being a navigable body of water, it is claimed to be the property of the State and under its control. By an act of Legislature the City of Rochester was authorized to construct a suitable conduit and draw from said lake water for domestic and other uses to the amount of 9,000,000 gallons per day. The outlet of Hemlock Lake is known as Honeoye Creek, upon which are located a number of mills and manufacturing establishments.

Soon after the said water-works were completed, suit was commenced by the mill-owners along this creek for alleged damage to riparian rights by diverting a portion of the waters of the lake from its natural course. The general defense set up by the city was that, the lake being a navigable water, it was the property of the State and under its control, and that the State had the right by act of Legislature to make any disposition of its waters that it might choose. This was met by the arguments on the other side that, while the State might have control of the lake, it had no control whatever of the water after it had passed out of the lake and entered Honeoye Creek, and that certain riparian rights existed along said creek over which the State had no control; and those rights called for all the natural flow of water that the lake afforded, and that by diverting a portion of the water from the lake the supply in Honeoye Creek was diminished, and consequently they were damaged thereby. The court sustained this argument, and judgment was rendered against the City of Rochester in the sum of \$90,000.—*C. B. Tompkins in "The Mechanical News."*

GO SLOW WITH OATMEAL.

Says the "American analyst:" We have nothing to say at present concerning the numerous vaunted benefits of oatmeal as a food commodity, and, indeed, there can be no doubt that good oatmeal properly prepared, is of benefit to the human system. But the question arises whether it is not a fact that, in our present age of hurry and the desire to do things quickly, many people injure their digestive organs by eating oatmeal not sufficiently cooked and, therefore, in a condition in which the digestive fluids can no tact upon it, leaving it undigested, simply to act as any foreign body would act in the system, as a violent mechanical irritant. We are forced to this conclusion by the now prevalent advertisements of oatmeal prepared by different manufacturers, and claimed to be so prepared as to enable it to be cooked in from three to five minutes. This is simply an impossibility. These so-called oatmeals are decorticated oats, which before grinding are steamed. This steaming destroys any low organisms that may be in the oats. A little

bicarbonate of soda and lime is added to help dissolve the albuminoids, and in some instances diastase to increase the converting power of the starch to sugar, but there is nothing in this process that can, in our opinion, so alter the chemical nature of oats or oatmeal as to make it possible to cook it ready for easy digestion in three or five minutes. Against this snare and delusion we would warn the reader. While thoroughly cooked oatmeal, cooked in the good old-fashioned way, is no doubt a nutritious dish, these deceitful and misleading prepared oatmeals are a constant source of great danger, and, to be on the safe side, avoid them.

FANTASTIC FLUFF.

We knead not weep, we doughnut know but that he'll win the heav'nly prize. Perchance he took some of his yeast, if so, then he will surely rise.—*A Bakers Epitaph*. In this world of folly it is dangerous to be a wise man, since it is the sage that generally flavors the soup.—*Baltimore "American,"* That's true! And what a thyme he has endiving into the soup! Lettuce beat too dumb and stewpid to turnip in the mullagatawney ourselves.—*THE MILLING WORLD*. Why don't some of the inventive geniuses of St. Louis utilize the Mississippi river to turning flour-mills? Why! dam it they can't. Why are centrifugal reels like ballet-girls? Because they are short dressers, you bald-head! What goes most against a farmer's grain? His reaper. What is the greatest surgical operation on record? Lansing Michigan. What is the greatest mechanical operation? Macon Georgia. What the greatest cycling feat? Wheeling West Virginia. And what the two greatest milling feats? Bolton England, and elevating Eli.—*St. Louis "Miller."*

FARMING THEN AND NOW.

Grumbling and kicking by farmers must not be translated to mean that the farmers of the United States were never in worse condition than they now are. Their conditions are bad enough now, but they have been worse. Charles M. Garman, of Des Moines County, Iowa, who knows by practical experience all about the condition of farms and farmers in that State, writes:

"In 1846 (free trade period), as my books show, we got only 10, 12½ and 15 cents for corn, and wheat in proportion. I remember selling hogs in Schenck & Denise's pork-house in this city (Burlington) for \$1.50 per hundred net. Sometimes I would have to stay in town, pay a hotel bill, take my turn while the hogs were weighed and slaughtered. Sales are made in this city to-day for \$3.60 per gross. Every practical farmer knows the difference between \$1.50 net and \$3.60 gross. I remember seeing Joab Comstock hauling wheat into town with an ox-team and selling it for 37½ cents a bushel. That was in 1846. That year we got 10 cents for corn and 8 cents for oats. Now, that would not have been so bad if we could have bought everything we wanted as cheap in proportion. But, unfortunately for us, that was not the case. We had to pay \$3 a barrel for salt, which we can buy now for \$1.20 to \$1.30. A farm wagon cost \$140. We can buy now a much better wagon for \$60; and hardware we can buy cheaper. A dozen files, for instance, can be bought now for the price which we then paid for one. That was not an exceptional case by any means, but all along through those years prior to the adoption of the protective tariff in 1861 there was not any great opportunity for farmers to make money. We had to pay \$50 to \$60 for a good overcoat, which can now be bought for \$15 to \$20, and nobody ever imagined that a good suit of clothes could be bought for \$10.

"With the development of our manufactures in this country and a diversity of industries, an immense amount of farm products is now raised for which there was then no market. And the rates of interest are much lower now than then. I remember paying as high as 22 per cent. before the war, but money can now be had for from 6 to 8 per cent. We used to pay \$250 to \$300 for a harvester; now we can buy one with binder complete for \$100. So it was at every point where the interest of the farm is touched. We can

get better prices for our products, and we pay less for what we buy. Occasionally there is an article, like sugar, that is an exception to this. We sometimes bought sugar as cheap as now, but it was not as good a quality, mostly common brown sugar. Then there is another thing to be considered. Farmers now buy a great many things that in those days were unthought of, or would have been looked upon as luxuries and extravagance. Our houses now have carpets and furniture, and a great many conveniences that we could not have afforded in the days of low tariff. We dress better, we have better houses, they are better furnished. We have better farm implements. We have a great many comforts that were not enjoyed by the pioneer farmer. These things, of course, cost money. If we would live as plain now as in those days, and do as little for schools and churches and the requirements of social life, we could probably put more money in the savings-banks than we do now. But the modern farmer is intelligent and progressive and wants to keep abreast of the times. He is a reading man and takes a list of newspapers and magazines, that in the days of low tariff would have appalled him by their expense. Every farm house has its little library. The prosperous farmer keeps his family carriage, and in a multitude of ways he indulges in expenditures that he would not have thought of in the days of low tariff."

IMPORTANT RESULTS OF PROTECTION.

Protectionists and free-traders alike should read the following array of facts, the former to confirm them in their faith in the protectionist doctrine, and the latter to convince themselves that they are wrong in opposing the principle of American protectionism. On most articles of domestic manufacture, where well established, the consumer pays about one-half the price the same articles cost 20 years ago. Salt of domestic manufacture is purchasable at 30 cents per 280 pounds, that sold 20 years ago at \$2.80. The present price is less than the duty on foreign salt. Soda-ash that cost \$48 per ton to import, with \$5 per ton duty added, is selling now at \$28 per ton. The consumption of the country is about 175,000 tons yearly. There are made at Syracuse 50,000 tons annually. Window-glass is 50 per cent. less in price than it was 20 years ago, and plate-glass, that used to sell at \$2.50 per square foot, can now be obtained at 75 cents per square foot. Borax that was formerly imported at 28 to 33 cents per pound is now selling for domestic production at 6½ cents per pound. Steel rails that sold in 1873 at \$166 currency, or \$138 gold per ton, have sold within the past year at \$26 to \$28 per ton, with duty \$17 per ton. Pig iron is at the present time much cheaper under a protective tariff than at any time in the last 55 years. Cotton cloth is purchasable at any retail store in the country at about the duty charged on imported. The free-trader alleges that the cotton manufacturers in this country make enormous profits. The answer to this is that 52 cotton-mills in Massachusetts and New Hampshire, with \$53,182,000 capital, averaged annual dividends during the 14 years from 1874 to 1887 of 6½ per cent. Carpets, body brussels of foreign make, with crude colors and bad designs, that in 1861 were \$2.75 to \$3.50 per yard, can now be purchased, of Philadelphia manufacture, of original and chaste designs, fine color, at \$1.25 per yard, and ingrain carpets that sold in 1861 at \$1.35 to \$1.50 can now be purchased at 75 cents per yard.

Woolen blankets, of American make, for army-hospital use were offered to the late Secretary of War, of quality superior to the foreign, at 30 cents per pair more than the Government paid for foreign blankets that were imported free of duty. Steel 14-inch files, that were formerly imported at \$7 per dozen, 10 per cent. off, with duty \$2.50, are now selling at \$2 to \$2.10 for American make, or 40 to 50 cents less than the duty. Woolen clothing can be purchased in New York of equal quality, finish and color as cheaply as in London or Liverpool. The list of articles can be indefinitely extended, showing a reduction in the price of most articles in 20 years to the American consumer of fully 50 per cent. An increase in 30 years of 42 per cent. in wages and a decrease in price of nearly every thing the American consumer

buys, of 50 per cent., is a result quite unlike the free-trader's theory. On more than 65 per cent. of the \$220,000,000 duties collected on imports, the foreigner pays the duty in the diminished net price of which he sells his goods, and the money goes into the United States Government Treasury. For illustration: A Minnesota and a Canadian farmer each send the same quantity and quality of wheat to the New York market, where wheat is worth \$1 per bushel. The duty on the Canadian wheat is 20 cents per bushel, which the New York consignee pays and charges to the Canadian farmer, netting him 80 cents against \$1 which the Minnesota farmer receives. The result is similar on all articles where we control the market.

SOMETHING ABOUT SEED-WHEAT.

According to scientific authority shrunken wheat is not necessarily the product of a weak plant; for oftener than otherwise a plant of more than average thrift bears shrunken grains. Some soils, particularly the black prairie soils, are rich in the elements that form the plant, but lack those which round out the grain. On such soils there is much straw and a light yield of grain often shrunken. In other cases the shrunken grains are caused by circumstances other than the condition of the plant. Very unfavorable weather when the grains are forming will prevent their rounding out. If plump grain always came from vigorous plants and shrunken grains from weakly ones, sowing shrunken grain would be objectionable, for the reason that it would be likely to produce weakly plants. The causes which prevent the grain from rounding out often affect the vigor of the germ; and unless the conditions are exceptionally favorable, a considerable percentage of the seed will fail to germinate. The starch in the grain is put there to sustain and build up the young plant until it can expand its foliage above ground. If the grain is very much shrunken, this supply of starch will not be sufficient for the need of the plant. While shrunken wheat can be bought at a lower price per bushel, and while a bushel of it will contain a greater number of grains, using it for seed is not economical.

The best method is to select the seed wheat in the field. Very few fields have a soil so uniform in character and condition and so equally exposed to the sun that every acre of grain will ripen alike. Some acres will have better wheat than others, and the best acres should be taken for seed. These may not have the heaviest straw. Very rank straw is not desirable, for it shows that the plant has been stimulated until it is overgrown. The straw should indicate that the plants were vigorous and healthy, but no more. Good wheat ripens uniformly, and the straw is clean, bright and golden. If there is much diversity in the length of the straw, long and short growing side by side, it is not good grain for seed; insects, disease or weather have injured the short plants, and their produce is not desirable for seed. There is another reason for selecting the seed wheat in the field: Wheat for flour should be cut when in the milk stage; but for seed it should be allowed to ripen fully to the point where it would scatter out when handled. The seed should be pure. If there are plants of other varieties in the field, they can be recognized and taken out.

THE GOVERNMENT CROP REPORT.

According to the government crop report for April, the condition of winter wheat on the 1st of April, as reported by the Statistician of the Department of Agriculture, averages 81 per cent for the entire breadth. The averages of the condition of the principal States are as follows: New York 88 per cent; Pennsylvania 99; Ohio 87; Michigan 67; Indiana 75; Illinois 75; Missouri 83; Kansas 87; California 71. The general average for rye is 92.8 per cent. Seeding was late in the States of the Central Valley, because of drought, and the soil was therefore not in the best condition; but the mild winter continued the growth until the wheat plants were too luxuriant to withstand the unusual vicissitudes of March. The recent floods and frosts have cut down the growing plants quite generally, and in wet or submerged areas the roots have been destroyed. There are reports of recupera-

tion by sprouting and renewed growth in this region. Where the roots are intact, great improvement will follow with good weather. The fact that the roots are so well developed is favorable to improvement. In the South the soil was generally in better condition and the early sown wheat developed rapidly, and in December and January it suffered more or less from attacks of the Hessian fly. In March frosts were very general, discoloring and sometimes killing the plants down to the ground, but not injuring the roots except in wet places. The crop looks brown in New York, but the State agent believes it is better than it looks. The other Middle States return wheat in good condition. The Pacific coast has had an extraordinary amount of rain and snow, which have delayed seeding and injured early sown areas.

The report of the condition of farm animals makes the averages as follows: Horses 97.4; cattle 94.1; sheep 93.97, and swine 95.6. The percentage of losses of farm animals by disease, winter exposure or otherwise, as estimated, average 1.64 for horses, 3.64 for cattle, 7.3 for sheep and 7.6 for swine. The winter exposure losses of cattle have been very heavy in the northern Rocky Mountain belt and in the Pacific coast. While it is difficult to get information from the ranches, it is certain that Montana, Idaho, Washington, Oregon and California have lost heavily in both herds and flocks by the severities and deep snows of a winter which has been one of remarkable mildness east of the mountains. The reports indicate the loss by exposure throughout the country of more than a million cattle and still larger losses of sheep.

THE NEW BALTIMORE ELEVATORS.

The directors of the Northern Central Railroad have decided to replace the burned elevator at Canton, and also to erect a local elevator on the property of the company in the vicinity of Calvert Station. The directors have increased the capital stock of the road \$357,500 for this purpose. The export elevator at Canton will be built on or near the site of the one destroyed. It will have a capacity of 1,000,000 to 1,250,000 bushels, with a full working capacity of 1,000,000 bushels. When completed, the elevator will be leased and operated by the Baltimore Elevator Company. It will be built at an approximate cost of \$300,000. The local elevator will be used chiefly for the storage of oats, but corn also will be handled. Heretofore all grain taken into Calvert Station on the Northern Central and Pennsylvania roads has remained in the cars until it could be removed by those to whom it was consigned. The elevator will have a capacity for 250,000 to 300,000, and will be built at an estimated cost of \$150,000.

THE WISCONSIN MILLERS.

The Wisconsin State Millers' Association held a meeting at the Plankinton House, Milwaukee, last Tuesday afternoon. The attendance, according to a dispatch, was small, and no important business was transacted. Secretary S. H. Seamans presented his report.

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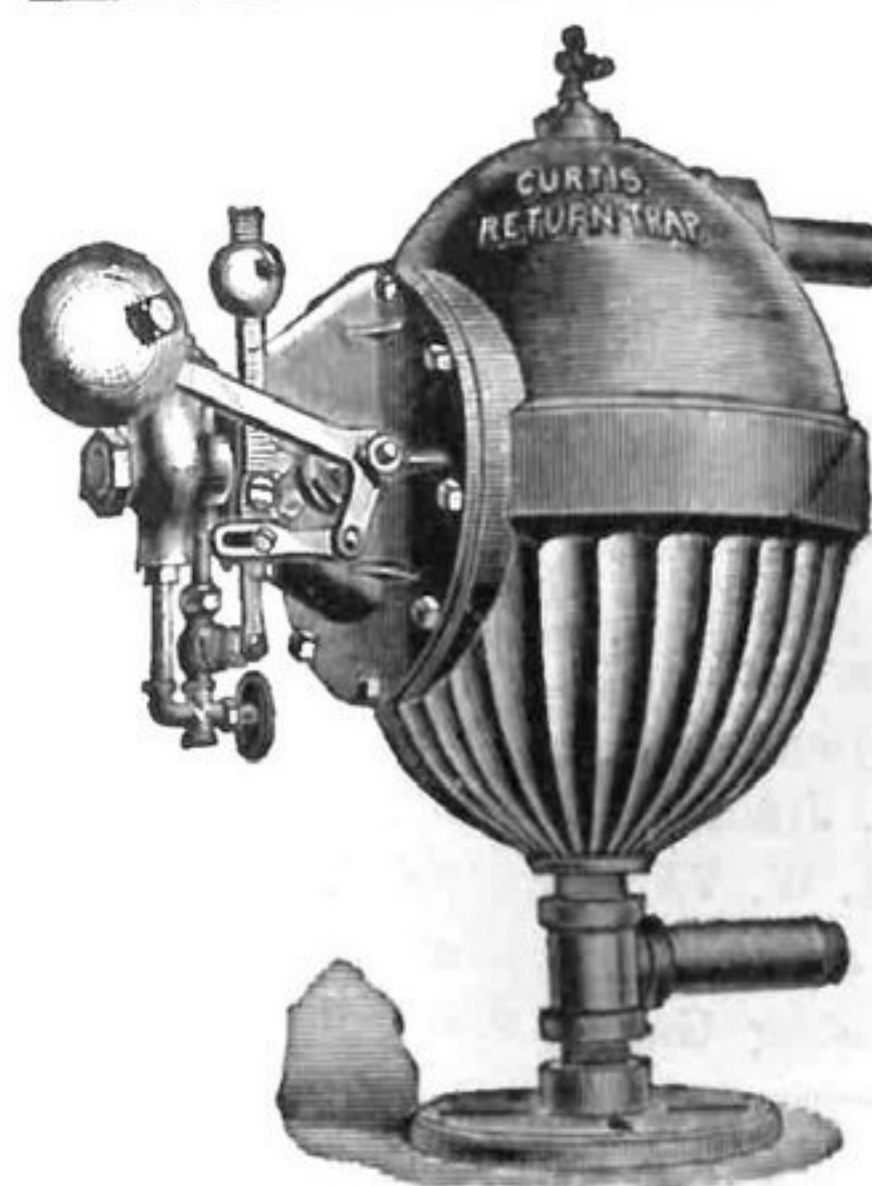
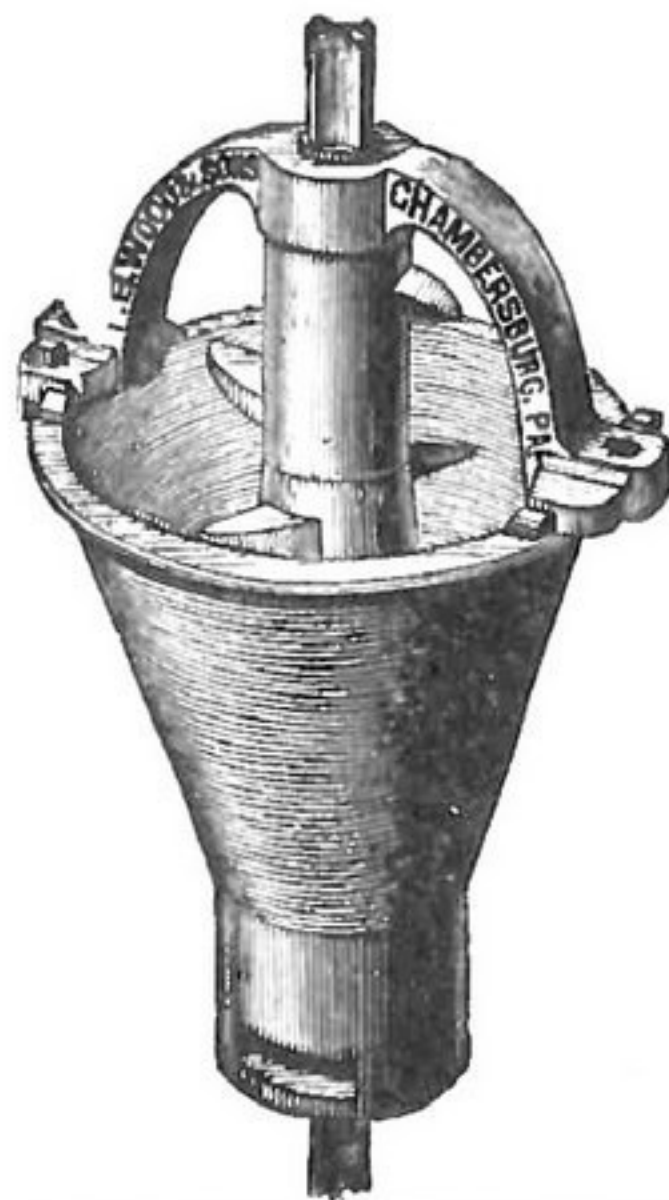
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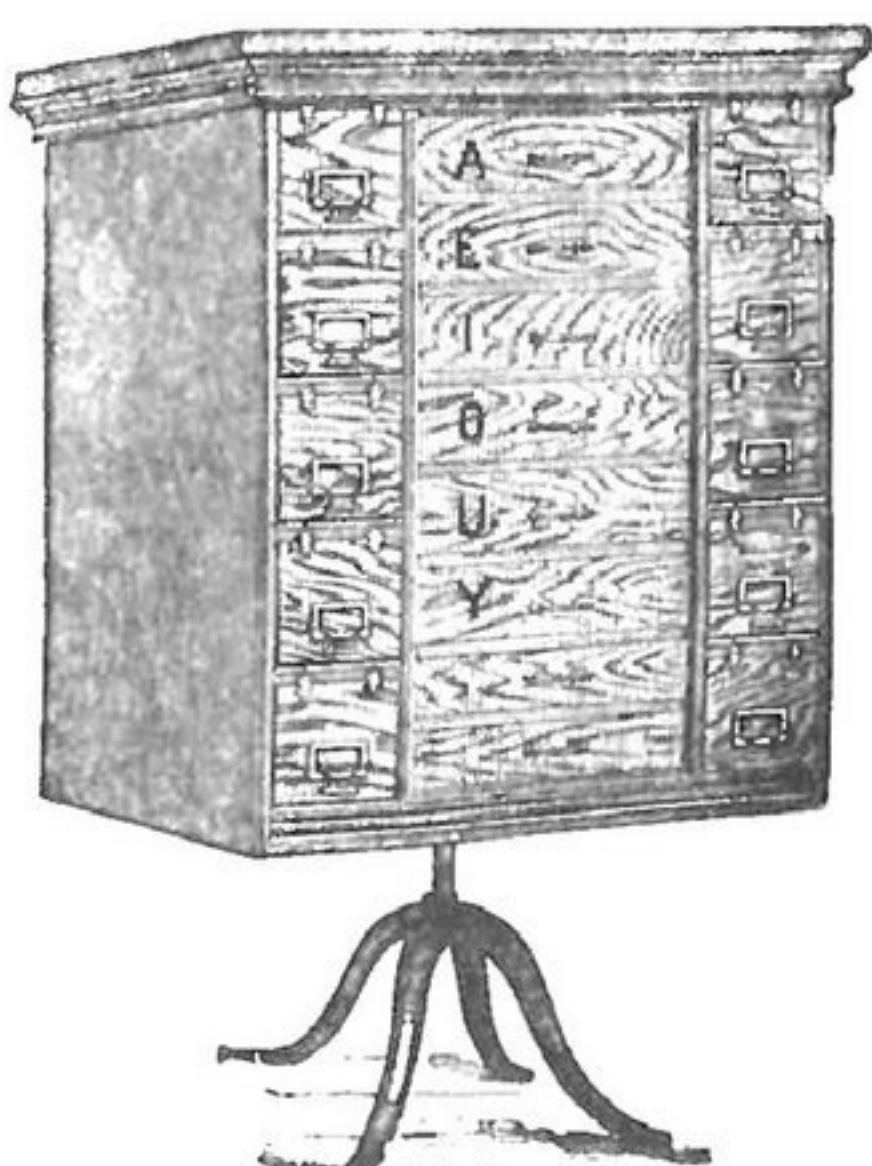
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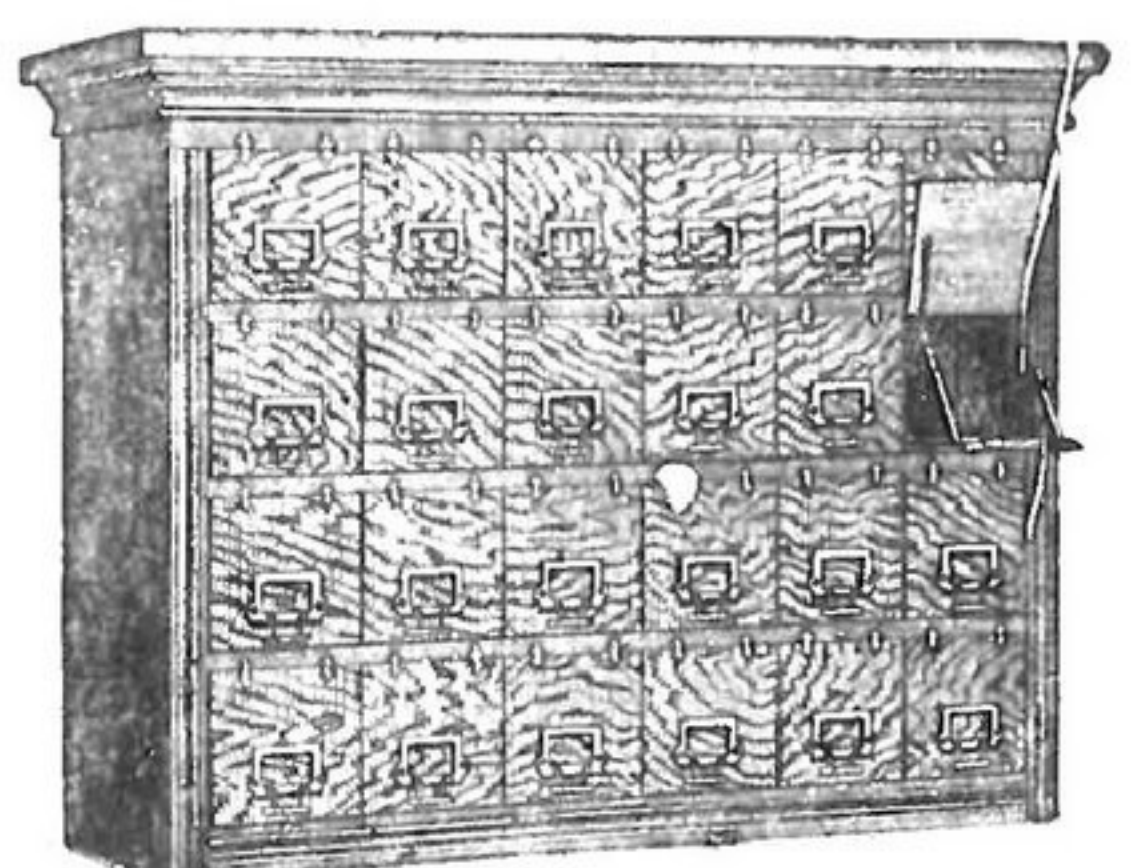
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 J. G. Siler, Franklin, N. C., builds a grist-mill.
 Irvington, Ky., men project a \$60,000 flour-mill.
 R. H. Burton's grist-mill, Midville, Ga., burned.
 B. D. Lee, Brownwood, Tex., builds a flour-mill.
 McCallum Bros., Chester, S. C., build a grist-mill.
 H. Hawkins' grist-mill, Hawkinsville, Ala., burned.
 Wallace & Davis, Waynesboro, Ga., build a grist-mill.
 John Adams, Allensville, Ky., has points on a flour-mill.
 I. L. Daniel and others, Stokes, Tenn., project a grist-mill.
 R. M. Pindell & Co.'s grist-mill, Anne Arundel co., Md., burned.
 The Farmers' Alliance, Goodletsville, Tenn., will build a grist-mill.
 J. R. Smith & Co., Purcellville, Va., are building a 4-story roller mill.
 The Enochville, N. C., Flouring Mill Co. want a set of rolls and a roller corn-mill.
 The Graham, Va., Land & Improvement Co. have points on a projected roller mill.
 Rogers & Weisflag's mill, West Liberty, Ia., burned; loss \$7,500; insurance \$4,500.
 T. C. May & Sons' grist-mill, Springhope, N. C., burned; rebuild; machinery is wanted.
 E. Shaw and others, Sorgho, Ky., have incorporated a company to build a \$6,000 grist-mill.
 Wichita Falls, Tex., will receive a flour-mill and grain-elevator from eastern capitalists.
 Wegley & Wilson's flouring-mill, Indiana, Pa., was fired by lightning on April 9. Loss \$15,000.
 The Wilson Flouring Mill, Adrian, Mich., was damaged \$25,000 by fire on April 9. Insurance \$17,500.
 S. Stetler's Winfield Grist Mill, Winfield, Mich., burned; loss \$30,000; insurance \$3,000; fire mysterious.
 W. Ballinger's roller flouring-mill, near Latrobe, Pa., burned; loss \$12,000; insurance \$8,000; fire incendiary.
 The Union Mill Co., Olmstead, Ky., bought the Boyd Bros. plant. They want machinery for another mill.
 The Stirewalt roller mill, Mill Hill, N. C., has been bought by Enochville men, who move it to Enochville, N. C.
 Slusher, Mitchell & McHenry, Middlesborough, Ky., will build a 500-barrel roller flouring-mill; they want machinery.
 J. V. Fulkerson and others, Ebenezer, Tenn., incorporated the Knox County Union Roller Mill Co., to build a flouring-mill.
 E. M. Macy and others, Farmington, Ala., have incorporated the Farmers' Alliance & Industrial Union Milling Co., capital stock \$55,000, to build a flouring-mill.
 W. L. Tillman and others, Columbus, Ga., have formed a company and bought the City mills property and water-power. They will build a mill to grind 500 barrels of flour and 25,000 bushels of meal daily. They want machinery.
 Levi Chubbick, secretary of the State Board of Agriculture of Missouri, says the condition of the wheat crop will not exceed 85 per cent. The bad condition is due entirely to the severe freezing weather which was general in the state through March.
 Dispatches from fifty points in Minnesota indicate that the agricultural outlook is most promising. The soil is in excellent condition, and with the heavy March snows and the two rains of this month there is more moisture in the ground than for the last two years. Seeding in a few neighborhoods was commenced two weeks ago and is now general all over the state.

A correspondent of the *Michigan Farmer* writing about Japanese buckwheat, says: "I have used the flour two years and can certify positively to its excellence. Of course the millers will need special screens for this, as the kernels are very large. It is stated by some that this yields less flour per hundredweight than does other buckwheat. I asked our millers at Lansing to notice this feature especially. They stated that the yield was excellent. One miller said that he had never ground any buckwheat that yielded better."

The executive committee of the Kansas State Millers' Association met at Topeka, Kan., Friday, March 14, to consider the differential of 5 cents per hundred between wheat and its products, which the railroad companies have always maintained between Kansas and Texas points. Quite a number of millers were present, all parts of the State being represented. There was a general discussion of the question. The committee decided to join with the Missouri and the St. Louis millers and file a complaint with the Inter-State Commerce Commission. Complaints have been made to the railroad companies, but they have refused to do anything. It was decided to hold the semi-annual state meeting at Newton, Kan., on July 10 and 11. The secretary was instructed to assess all mills of 100 barrels' capacity \$5, all mills between 100 to 200 barrels \$10, and \$15 on all mills over 200 barrels' capacity. A motion to appoint a committee of three, to prepare the case of the Kansas millers for presenting it before the Inter-State Commerce Commission, was carried.

Friday of last week was a lively day in the grain markets of Chicago and New York. The winter-wheat reports were very gloomy, and the government report, the nature of which was made known, went far towards confirming the most unfavorable things said about the winter crop. In New York there was great excitement. The option sales reached the enormous total of 30,320,000 bushels, and April wheat closed at 91½c., against 85½c. a year ago. May wheat closed at 91½c., June at 91½c., and July at 90c. Corn was very firm at 39½c. for May, and oats were higher. The government report makes the condition of winter wheat 81 per cent., against 94 per cent. a year ago. A Cincinnati estimate made the condition 85 per cent., but the government report was naturally accepted as the more reliable. The principal "one-man factor" in the market, both grain and provision, was B. P. Hutchinson, of Chicago, who is thought to have a bad "cinch" on the May options in wheat. The State Board of Agriculture of Indiana reports the wheat crop in that State at 70 per cent. in condition and 94 per cent. in acreage. The opinion prevails that, even with the best possible crop weather from now until harvest, the winter wheat yield of the United States will fall far below that of 1889 and 1888. At this date the "bulls" seem to have everything their own way.

PERSONAL MENTION.

Mr. George T. Smith, of Jackson, Mich., says in a recent letter: "I am on earth and have commenced operations again; will be in full bloom soon. I have something entirely new to bring out to the milling world, and it is to revolutionize mill-building. I still have the control of all patents on the celebrated George T. Smith machines."

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.
 A NEW HOME TREATMENT.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King street, Toronto, Canada.—*Christian Advocate*.

Sufferers from Catarrhal troubles should carefully read the above.



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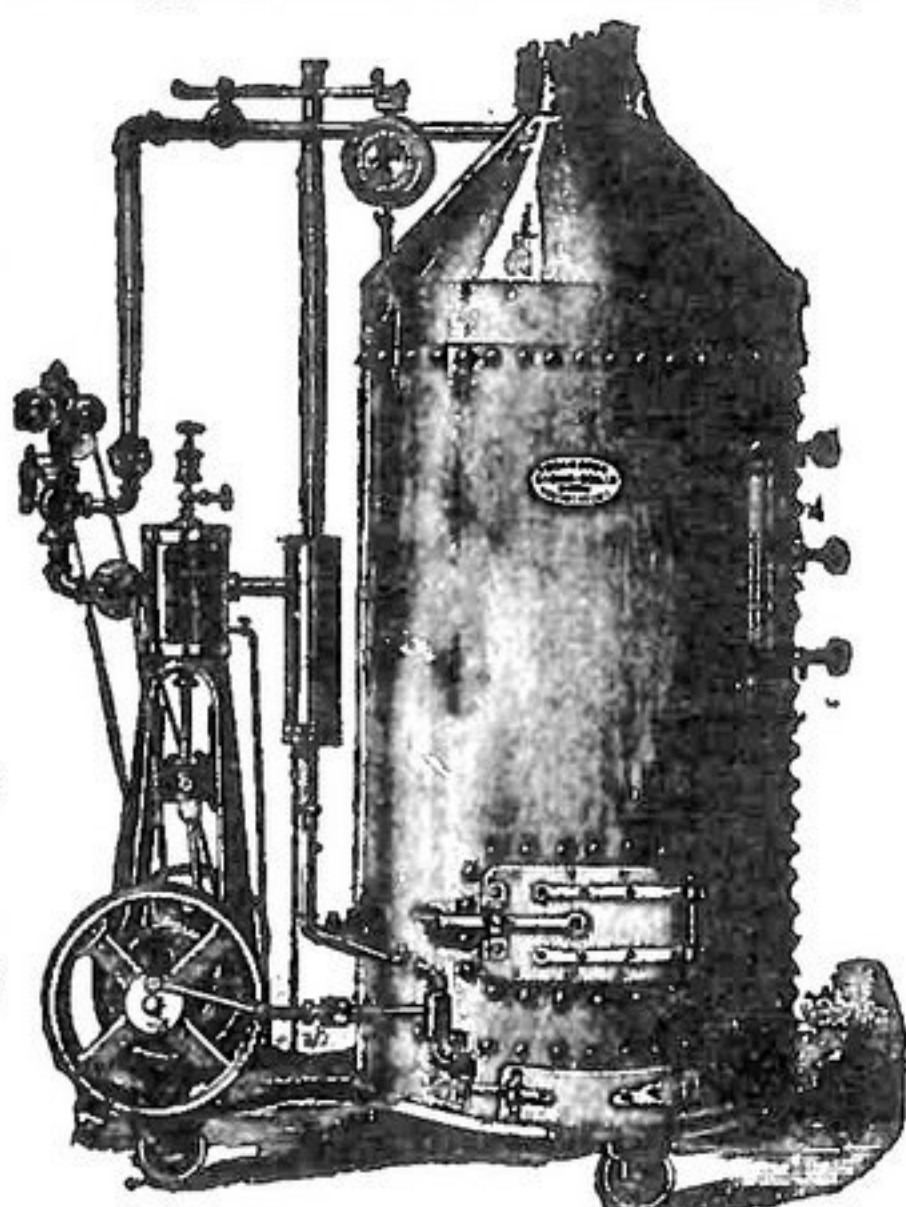
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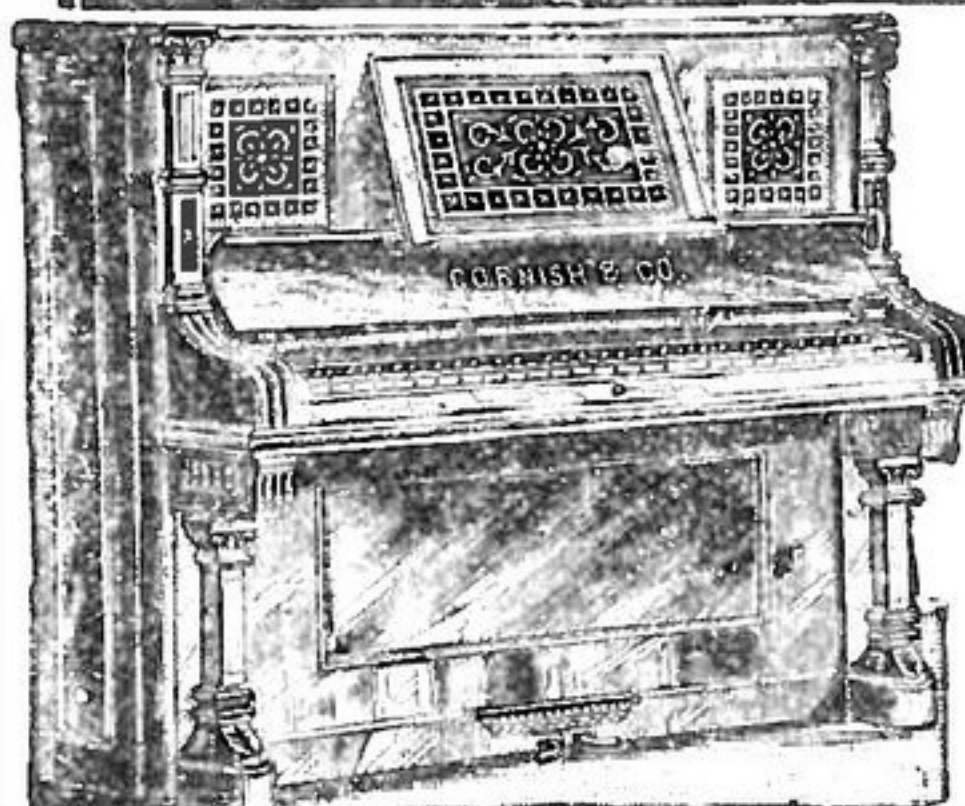
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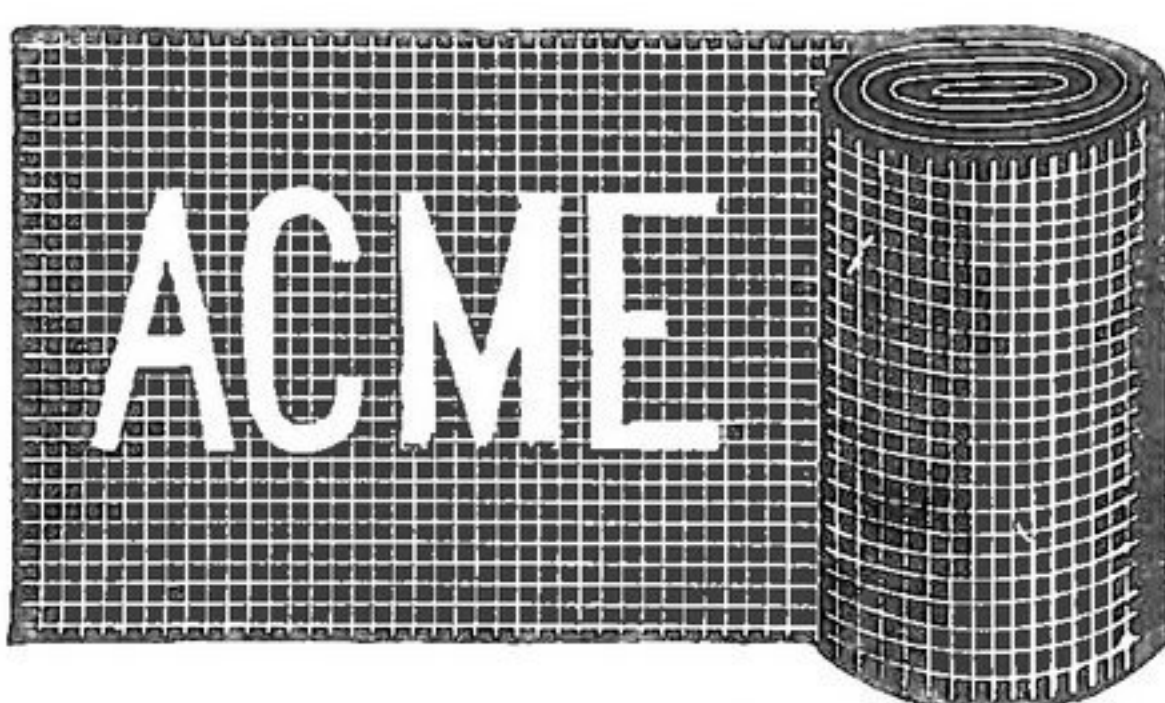
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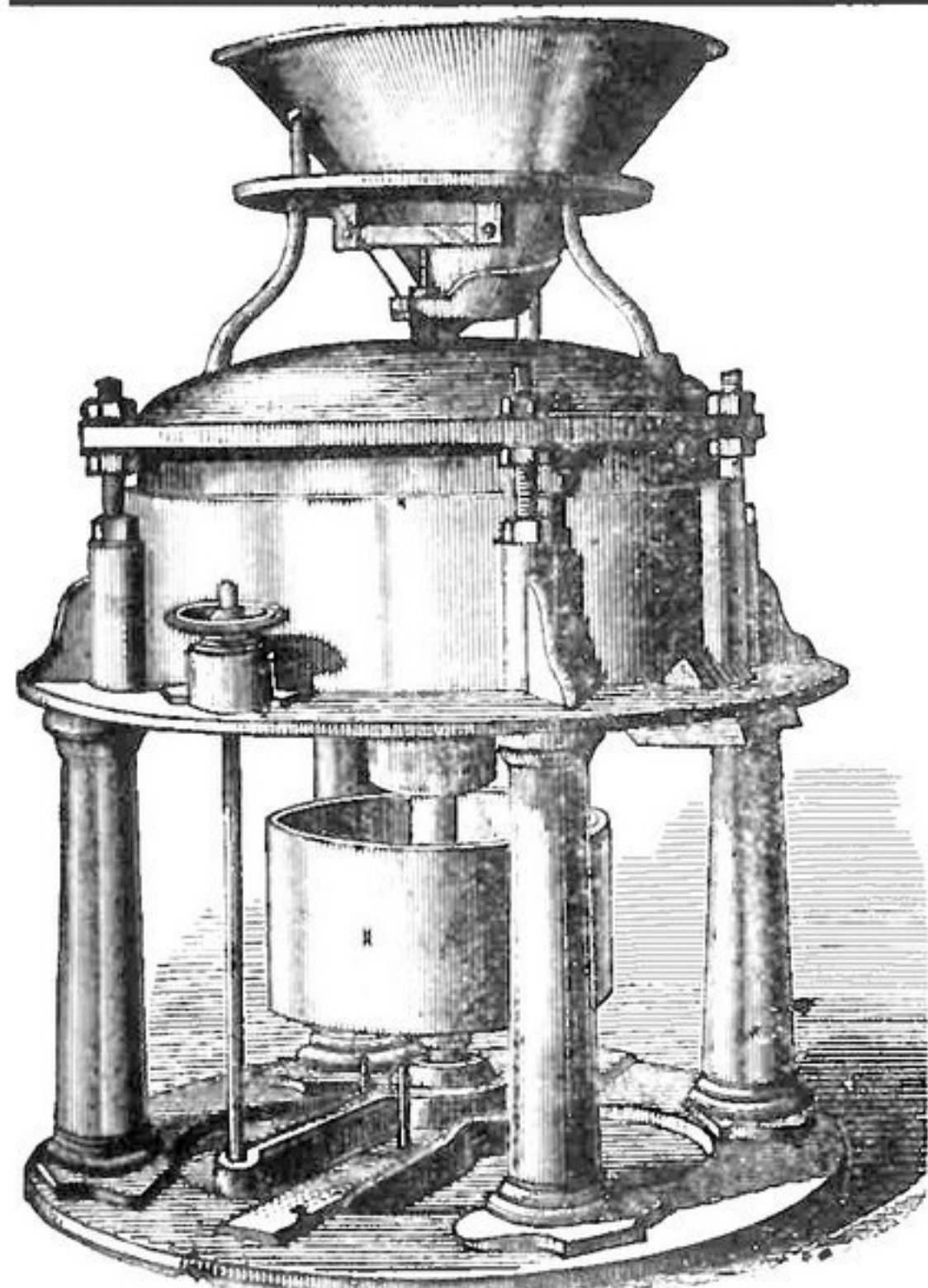
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SEND FOR CATALOGUE AND PRICE LIST.

EUROPEAN ECHOES.

SAYS the London "Millers' Gazette" of March 24: We are informed that H. Simon has applied to the Patent Office for leave to amend one of his principal patents on the Reform purifier, and we understand that Messrs. Higginbottom & Co. have opposed the application. More "patent" litigation seems, therefore, in prospect.

HOME competition is evidently excessively keen in Germany just now, and the smaller mills are apparently suffering severely in many districts at the hands of the larger mills, or "flour factories," as they are termed. Custom millers are reported to be in a bad way in Brunswick and in Hesse. In the former district it is reported that a country miller, who does not supplement the work of his mill by farming or some other occupation, finds it very hard to live.

SAYS the London "Miller" of March 24: Australia emphasizes former reports as to the heavy deductions that have to be made from early crop estimates; only about 1,000,000 quarters of wheat are likely to find their way to Europe. New Zealand is now securing an abundant and fine yield. Present rates for Australian wheat seem able to attract shipments, but lower prices are not thought likely. 34s. 6d. per 480 pounds, or 36s. in Mark Lane for 496 pounds, is very cheap for fine white wheat. For the small lot arrived 38s. 6d. has been made.

THE reports concerning the winter-sown crops in Russia have improved and are now considered very favorable, so that the previous reports of damage by frost had evidently no real basis. At Nicolaieff navigation is re-opened, and the Azof ports are expected quickly to follow suit, so that a temporary increase in the shipments is to be expected; but it is clear from the small stocks in the Southern ports, the stock at Odessa on March 1 to 13 being finally estimated at 391,000 quarters, against 810,000 quarters last year, and the great shortage in the last crop, that any increase in the exports can only be of short duration.

SAYS the London "Miller" of March 31: The extremes of weather changes have been felt during the month of March, 1890. The heat of Friday last was equal to most summer days, and the buds of trees answered to sunshine of 80 degrees and 65 degrees in the shade. Still the working of the barley seed beds has not been satisfactory, and some farmers talk of sowing April wheat, which, in most cases, results only in poor samples and a poor yield. Barley has yet time to be seeded and grow into a fine crop; 90 days' straightaway seed time to harvest are enough in a favorable season. As to the main wheat crop, that sown from October to the end of December is in fairly good thriving condition, without being premature in growth.

COTEMPORARY COMMENT.

News comes from Ottawa that the bill to grant certain powers to the Canadian Millers' Mutual Insurance Company has been thrown out in committee. It was incorporated under provincial legislation, and the Minister of Finance objected that it sought to do a general business without complying with the General Act requiring companies to make a deposit.—*Toronto "Millers' Gazette."*

A few days since it was announced by cable that the agricultural position in Ontario was developing tangible dangers. Farmers were said to be migrating wholesale into the United States, after mortgaging their farms for as much as they could. Judging from the report just issued by the Scottish Ontario and Manitoba Land Company, there may be some truth in this dismal statement. The directors indulge in a positive jeremiad over the past year's working, and state that they have considered seriously the question of abandoning farming operations. If any more Canadian Land Companies are put before investors here, they had better take pains to ascertain exactly where the properties

are situated, for the general experience just now seems to be unfavorable, while the prospects of Ontario could scarcely be blacker.—*London, Eng., "Financial Times," March 26, 1890.*

A socialistic settlement at Port Angeles, Wash., called the Puget Sound Co-operative Colony, has applied to the courts to wind up its affairs. We are not surprised that the colony has applied to the courts, for it tried to solve the social problem without the aid of a grist-mill. If they had erected a grist-mill and then failed, they could have ground up their own affairs. Such oversight is inexcusable.—*Chicago "American Miller."*

There are some things about some mills which make us feel very philanthropic, fill us with a strong desire to give somebody something, and cause us to wish that we were a great big hearted judge, presiding at the trial of certain people, so that we could be instrumental in bestowing upon them the munificent sentence of ten years in the penitentiary. The things we have in mind are gear-wheels with the gathering sides exposed; set-screws and rapid running machinery having parts calculated to catch on to a coat-tail or shirt-tail, et cetera, and all furnishing an unguarded death-trap to the unwary.—*St. Louis "Miller."*

INVESTIGATION IN WHEAT YIELDS.

Experiments and investigation in wheat culture, made at the Ohio experimental station for years, have shown wheat-growers which varieties are best adapted for culture in that state. The results are about the same as those in Indiana, and the figures, presented in the following table, therefore cover a wide and important wheat-growing section. Here are the results:

| Name of Variety. | Bush's per acre. | Number of years raised. | Average per acre. | Per cent. shriveled grain-1889. |
|----------------------------|------------------|-------------------------|-------------------|---------------------------------|
| 1 Wyandotte Red | 34.5 | 4 | 34.4 | 10 |
| 2 Dietz | 38.6 | 4 | 36.3 | 25 |
| 3 Nigger | 40.6 | 5 | 36.9 | 05 |
| 4 Velvet Chaff | 41.3 | 8 | 32.1 | 00 |
| 5 Egyptian | 46.1 | 8 | 34.1 | 10 |
| 6 Valley | 44.5 | 5 | 39.3 | 00 |
| 7 Silver Chaff (smooth) .. | 37.8 | 9 | 34.5 | 00 |
| 8 Red Fultz | 37.3 | 5 | 39.1 | 00 |
| 9 Tasmanian Red | 37.1 | 5 | 35.8 | 20 |
| 10 Democrat | 45.3 | 6 | 36.1 | 00 |
| 11 Martain's Amber | 47.8 | 5 | 35.8 | 00 |
| 12 German Emperor | 30.4 | 3 | 30.1 | 30 |
| 13 Michigan Amber | 32.6 | 6 | 31.7 | 00 |
| 14 Theiss | 37.8 | 7 | 31.6 | 10 |
| 15 French Prairie | 45.1 | 3 | 39.3 | 15 |
| 16 Diehl Mediterranean .. | 42.1 | 5 | 36.9 | 20 |
| 17 Landreth | 41.1 | 5 | 34.0 | 00 |

These yields are a strong commentary on the "official" yield of 11 or 12 bushels to the acre generally published and accepted. The percentage of shriveled seeds in 1889 in some of the varieties may be due to bad seed or to climatic causes. The shriveling feature was recorded last year for the first.

BOOKS AND PAMPHLETS.

We have received a copy of the annual report of the Buffalo Merchants Exchange for 1889. The report is a neat 128-page volume, making a most gratifying showing of the trade and commerce of the city for the past year. Copies may be had of Mr. William Thurstone, secretary of the Merchants' Exchange, Buffalo, N. Y.

A NEW METHOD OF TREATING DISEASE.

HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, has ruined more stomachs than alcohol. A circular describing these new remedies is sent free on receipt of stamp to pay postage by Hospital Remedy Company, Toronto, Canada, sole proprietors.

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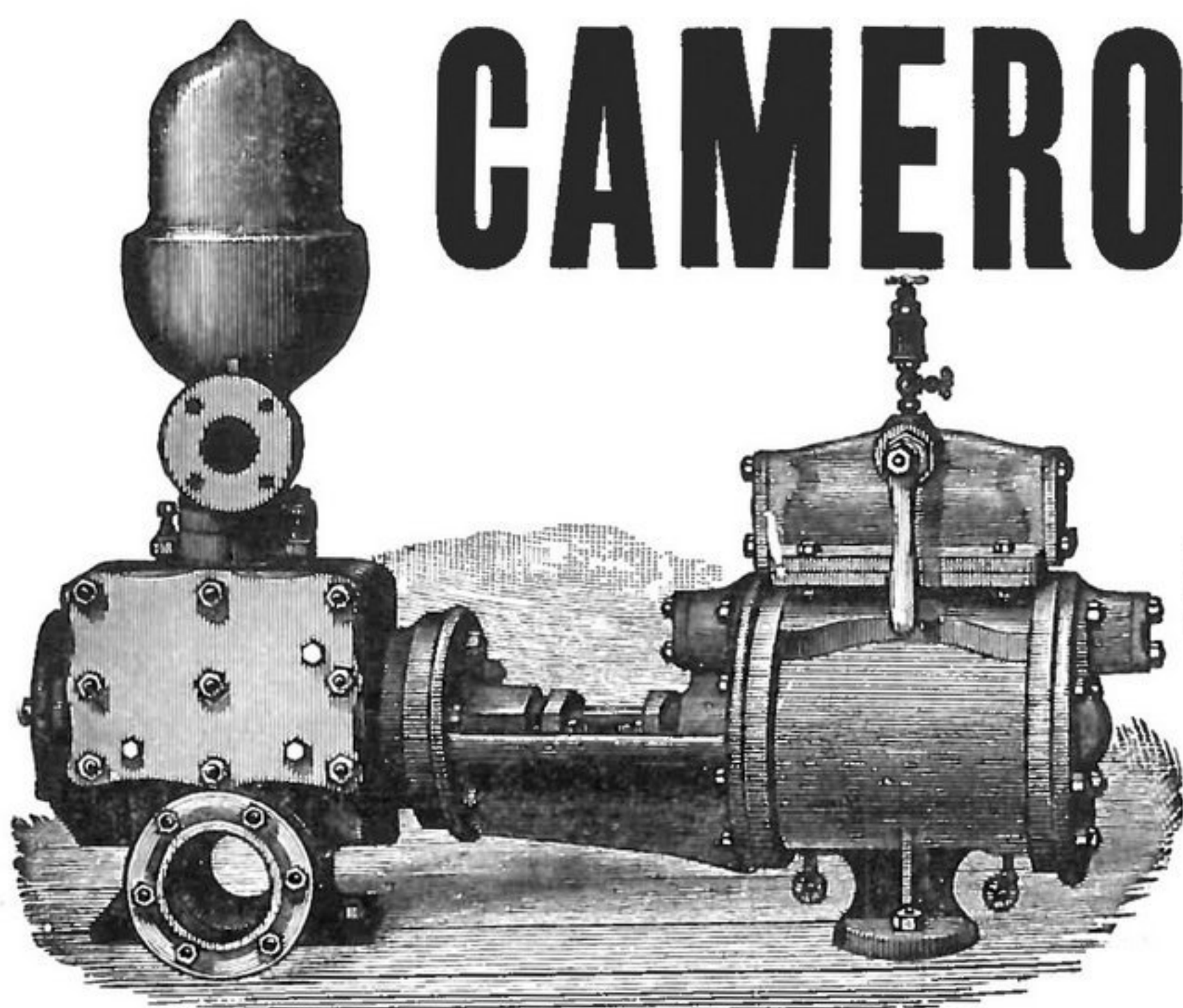
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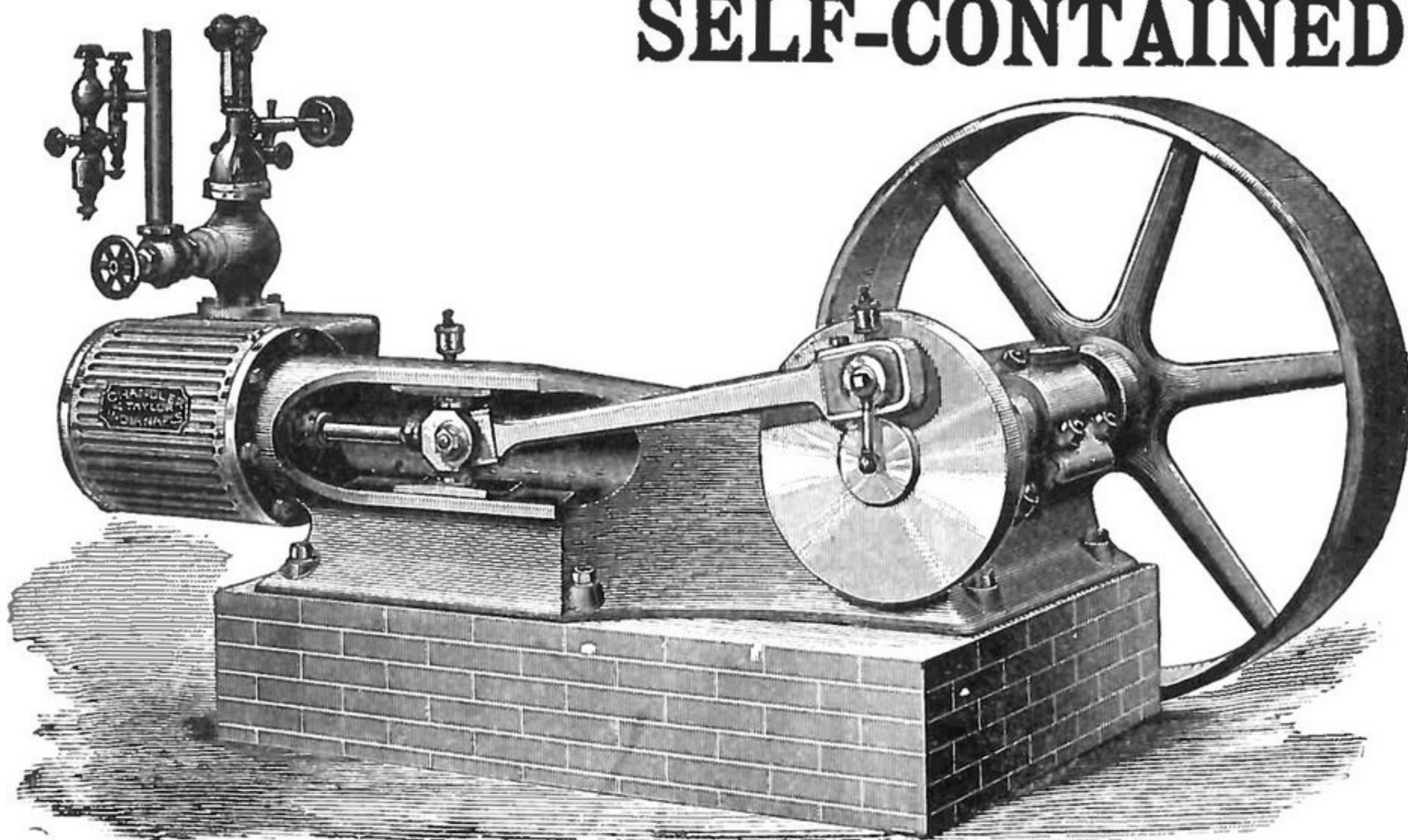
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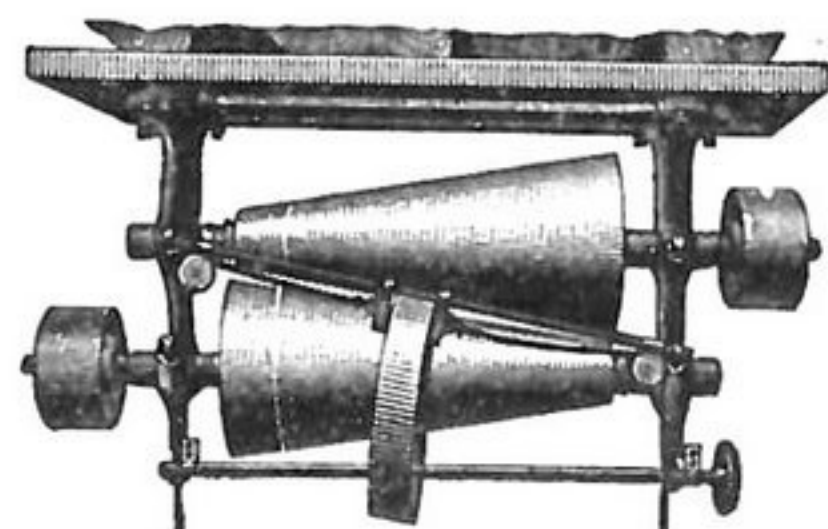
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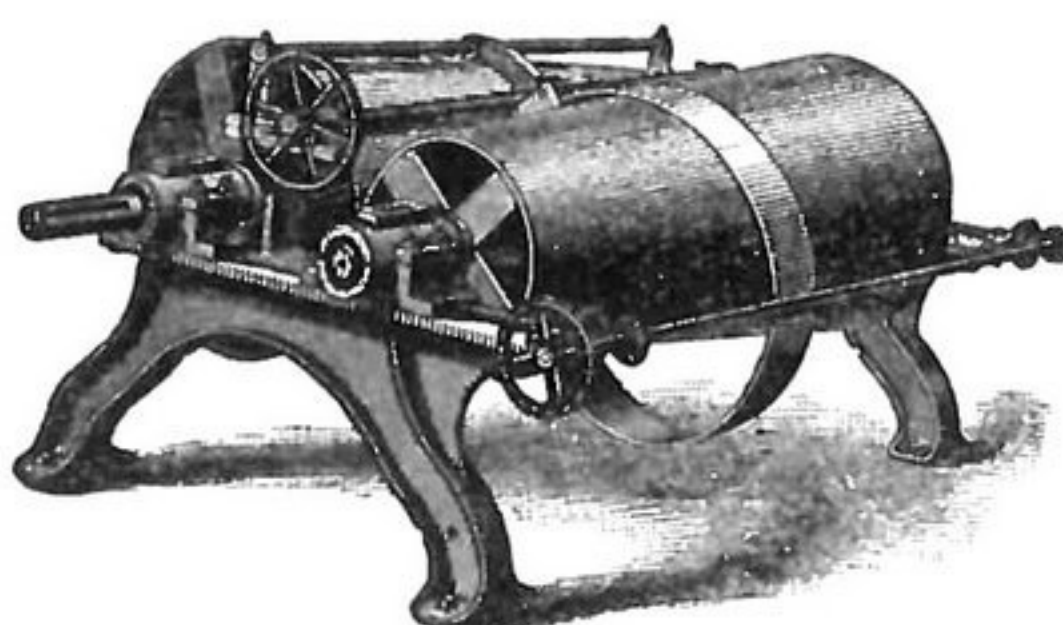
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BLANKS. SEND FOR
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OFFICE OF THE MILLING WORLD,
BUFFALO, N. Y., April 12, 1890.

Saturday of last week brought bad crop reports from the winter-wheat regions, with manipulation of corn and wheat by Hutchinson in Chicago, and general covering by shorts, resulting in higher, active and excited markets. April wheat closed at 87½c., or just 1½c. above the notch a year ago. Atlantic port receipts were 54,452, exports 47,895, and options 3,440,000 bushels. The bears continued to flout the unfavorable wheat crop reports. April corn closed at 38¼c., with receipts 334,420, exports 257,141, and options 960,000 bushels. April oats closed at 29½c., with receipts 268,571 and exports 69,229. Wheat flour was dull and featureless at old prices. Receipts were 18,948 sacks and 35,080 barrels, and exports 22,146 sacks and 12,266 barrels. The minor lines were featureless.

Monday brought higher markets again, with still greater activity and excitement. The bad crop reports were numerous and persistent, so much so that even the bears were forced to recognize them. Reports of a May wheat corner made the markets nervous and uneasy. There was some speculative manipulation, but most of the strength seemed to come from the bad crop reports. April wheat closed at 88½c., or 3½c. above the notch a year ago. Receipts were 54,864, exports 26,959, and options 14,400,000 bushels. April corn closed at 38½c., with receipts 396,098, exports 435,367, and options 4,420,000 bushels. April oats closed at 29½c., with receipts 187,240, exports 203,341, and options 500,000 bushels. Wheat flour was more active and slightly stronger, closing 5@10c. higher in some lines in sympathy with wheat. Receipts included 13,152 sacks and 43,457 barrels, and exports 17,555 sacks and 12,974 barrels. The minor lines were featureless. The visible supply in the United States and Canada was:

| | 1890. April 5. | 1889. April 6. | 1888. April 7. |
|-------------|-------------------|-------------------|-------------------|
| Wheat..... | 26,845,538 | 28,779,354 | 33,583,420 |
| Corn..... | 21,412,707 | 16,501,763 | 8,803,951 |
| Oats..... | 4,504,662 | 7,008,644 | 3,777,491 |
| Rye..... | 1,375,794 | 1,545,994 | 327,286 |
| Barley..... | 1,176,309 | 1,181,377 | 1,556,142 |

Tuesday was another day of active, unsettled and excited markets all around. April wheat closed at 88¾c., with receipts 14,854, exports 39,372, and options 18,400,000 bushels. The nervousness of the markets was caused by the general trading in May wheat, all the traders fearing the next government report, but not daring to wait until the real damage suffered by winter wheat is revealed by that report. April corn closed at 38¼c., with receipts 499,027, exports 197,937, and options 792,000 bushels. April oats closed at 29½c., with receipts 177,581, exports 17,398, and options 590,000 bushels. Wheat flour was stronger and more active on all trade brands by 5@10c. over late bottom prices. Receipts were 11,124 sacks and 57,381 barrels, and exports 4,467 sacks and 17,868 barrels. The minor lines were featureless.

Wednesday brought still higher markets all around, with continued activity and excitement. The reports on the winter-wheat crop were exceedingly bad, and they poured in all day long, giving the bears the bluest of blue chills and cheering the bulls up to the seventh heaven of delight. April wheat closed at 89¾c., against 85½c. a year ago; May closed at 89¾c., against 86½c., June closed at 89¾c., against 87½c., and July closed at 88c., against 88½c. Receipts were 31,473, exports 67,484, and options 19,952,000 bushels. The bad Illinois, Indiana, Michigan and Missouri wheat crop reports, with the rumor that Old Hutch, of Chicago, has prepared a terrible "squeeze" for the May shorts, made the dealers nervous and

even panicky. April corn boomed up to 39c. at closing, with receipts 408,834, exports 281,067, and options 1,480,000 bushels. April oats shared in the advance, closing at 30c., with receipts 196,773, exports 14,852, and options 610,000 bushels. Wheat flour was held higher and more firmly all day on all the list from fine upward. The day's advance was 5@10c. over the top of Tuesday's prices. Buyers of flour pretended to discredit the bad wheat crop reports, and they bought only in cases of necessity. Receipts were 10,572 sacks and 21,967 barrels, and exports were 510 sacks and 43,603 barrels. The minor lines were generally stronger. The day was one of total discouragement for the bears, although they pretended to believe that the strength was wholly the result of manipulation, and that the coming government report will fail to confirm the reported bad crop conditions in the winter-wheat regions.

The following shows the amount of wheat and, together with the amount of corn on passage to United Kingdom, for ports of call or direct ports for the weeks mentioned:

| | 1890. April 8. | 1889. April 9. |
|--------------------------|-------------------|-------------------|
| Wheat and flour, qrs.... | 2,699,000 | 1,854,000 |
| Corn, qrs..... | 558,000 | 384,000 |

The following shows the amount of wheat and corn on passage to the Continent for the past week and for the same week last year:

| | 1890. April 8. | 1889. April 9. |
|-----------------|-------------------|-------------------|
| Wheat, qrs..... | 604,000 | 340,000 |
| Corn, qrs..... | 589,000 | 282,000 |

| | Qrs. |
|------------------------------------|--------|
| Shipments India wheat to U. K..... | 17,500 |
| do do Continent.. | 25,000 |

The imports into the United Kingdom for the past week, the previous week and for the same week in previous year were as follows:

| | 1890. April 8. | 1890. April 1. | 1889. April 9. |
|------------------|-------------------|-------------------|-------------------|
| Wheat, qrs..... | 182,000 | 174,000 | 201,000 |
| Corn, qrs..... | 206,000 | 227,000 | 230,000 |
| Flour, bbls..... | 106,000 | 149,000 | 176,000 |

Thursday brought a continuation of the activity and excitement. April wheat closed at 89¾c., May at 89¾c. and June at 89½c. Receipts were 15,000, exports 45,000, spot sales 12,000, and options 16,880,000 bushels. April corn closed at 38½c., with receipts 102,700, exports 116,000, spot sales 258,000, and options 1,600,000 bushels. April oats closed at 29½c., with receipts 41,000, spot sales 116,000, and options 335,000 bushels. Rye grain was firm at 57@58½c. for State. Barley was strong at 54@58c. for State, 45@62c. for Western, and 60@70c. for Canada. Barley malt was steady at 62½c@72½c. for 2-rowed State, 72½@85c. for 5-rowed State, and 75@87½c. for Canada.

Wheat flour was active and generally higher from 5@10c. Receipts were 16,807 packages. Sales amounted to 32,700 barrels, including the following rates: Low extras \$2.20@2.70; city mills \$4.30@4.50; city mills patents \$4.75@5.25; winter wheat low grades \$2.20@2.70; fair to fancy \$2.90@4.60; patents \$4.40@5.10; Minnesota clear \$3.35@4.20; Minnesota straights \$3.85@4.65; Minnesota patents \$4.50@5.25; Minnesota rye mixtures \$3.15@3.90; superfine \$2.10@2.50. Holders were firm, and buyers began to wonder whether the wheat movement on bad reports would continue indefinitely. Inquiries were numerous, and holders gained courage as buyers lost.

Rye flour was stronger, at \$2.90@3.25. Cornmeal was quiet at \$2.10@2.45. Mill-feed was steady and quiet, at 72½@77½c. for bran, 87½@91½c. for middlings, and 72½@75c. for rye feed. The Minneapolis output of flour the past week was only 110,640 barrels. The direct Minneapolis exports shipments for the week were 31,540 barrels. During March the mills ground 596,710 barrels of flour, against 498,080 in February, and 404,445 barrels in March, 1889, and 539,200 barrels for March, 1888. For the seven months ending March 31 there were 4,345,615 barrels ground, against 3,412,500 barrels a year ago, and 3,924,680 barrels during the same per-

iod in 1827. The March exports to foreign countries were 150,710 barrels, against 140,350 in February 112,030 for March, 1889, and 190,100 for March, 1888. For the seven months 1,409,445 barrels were exported, against 711,725 in 1888-9 and 1,444,360 in 1887-8. Receipts of wheat for the week ending April 9th were 435,905 bushels; shipments, wheat, 148,480 bushels; flour 177,452 barrels; mill stuff 4,022 tons.

BUFFALO MARKETS.

WHEAT—Nothing was done in spring wheat to-day. A little No. 2 red was sold at 86c., but it is held generally at 87@88c.; No. 1 white was sold to-day at 88c. for three cars, and 88½c. for two cars. Three cars No. 2 extra white brought 87½c., and one car 87c. on track. CORN—The market was rather slow to-day. Two cars of No. 2 yellow were sold at 37½c.; 20,000 bushels of No. 2 corn in store at 36½c.; 3 cars of No. 3 corn at 36c.; 4 cars at 36¼c.; 3 cars of No. 4 at 35½c., and one car at 35¾c. OATS—The market remains strong, and 3 cars of No. 2 white were sold at 31c.; 2 cars of No. 2 mixed at 28½c., and one car do at 28c. on track; No. 3 white are quoted at 29¾@30c. RYE—Quotations remain at 50c. for No. 2, but few sales are made. BARLEY—No. 1 Canada is quoted at 65@66c., No. 2 at 62@63c., and lighter grades at 55@61c. Some nice barley was sold to-day at 59½c. OATMEAL—Akron, \$6.00; Western, \$5.75 per bbl.; rolled oats, in cases, 72 lbs., \$3.25. CORNMEAL—Coarse, 80@85c.; fine, 85@90c.; granulated, \$1.50 per cwt. MILLFEED—City-ground coarse winter, \$13.50@14.00 per ton; fine do, \$14.50@15.50; finished winter middlings, \$15.00@15.50; coarse spring do, \$13.00@13.50.

FLOUR MARKET.

| Spring Wheat. | Winter Wheat. |
|--------------------------|-------------------------|
| Patents..... \$5.50@6.00 | Patents... \$4.75@5.25 |
| Straight..... 4.50@5.00 | Straight..... 4.25@4.75 |
| Bakers..... 3.50@4.00 | Clear... 3.75@4.25 |
| Red Dog..... 2.25@2.75 | Low grades.. 2.50@3.00 |

Retail prices 50c per bbl above above these quotations. Buckwheat flour \$1.40@1.75 per 100 lbs.

The weather crop bulletin for Illinois, made up April 8 in connection with the United States signal service report, does not help the Illinois prospects on the winter crop. Out of 20 counties reported, Randolph is the only one noting an apparent improvement. Generally they fix the average at 50 per cent. or more. The season is considered backward and the ground too cold and wet for spring work. In most counties of the state the area planted to corn will be 15 or 20 per cent. less than last year.

In the distribution of feed contributed to Dakota farmers suffering from last years drouth, arrangements were made at Huron last week, to divide corn among the several counties according to their needs, as follows: Miner county 32,000 bushels, the largest amount to one county, McCook 600 bushels, being the smallest, Brown 19,000, Spink 20,000, Beadle 17,000, and the others ranging from 5,000 to 12,000 bushels each.

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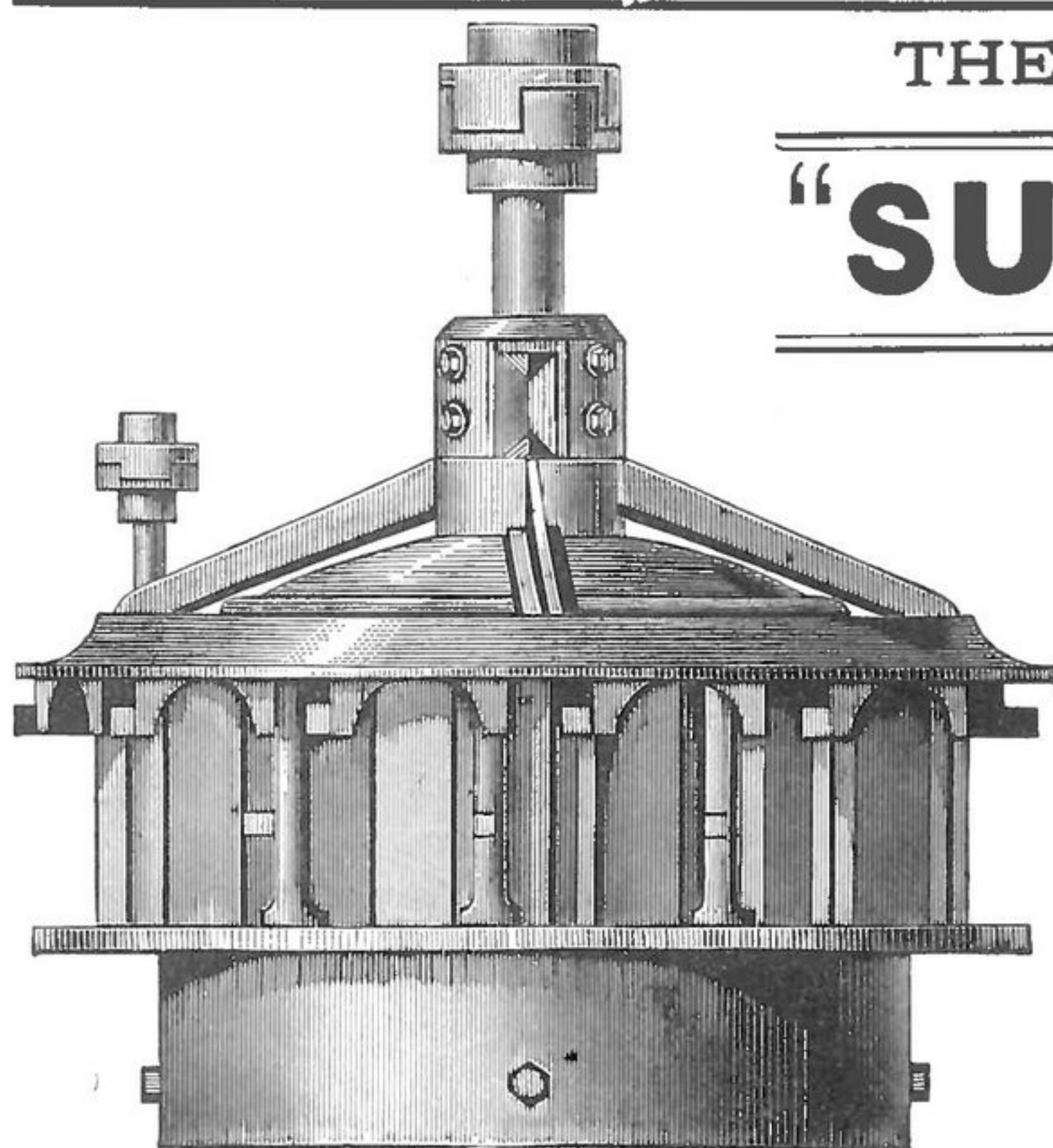
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STEEL ELEVATOR
BUCKETS.

| SIZE. | PRICE. |
|----------|--------|
| 3x3..... | 4c |
| 4x3..... | 6c |
| 5x4..... | 9c |
| 6x4..... | 13c |
| 8x5..... | 18c |

LEATHER.

| SIZE. | PRICE. |
|-------------|--------|
| 4 inch..... | 20c |
| 5 "..... | 25c |
| 6 "..... | 32c |
| 8 "..... | 40c |
| 10 "..... | 52c |

RUBBER.

| SIZE. | PRICE. |
|-------------|--------|
| 4 inch..... | 13c |
| 5 "..... | 17c |
| 6 "..... | 20c |
| 8 "..... | 28c |
| 10 "..... | 36c |

COTTON.

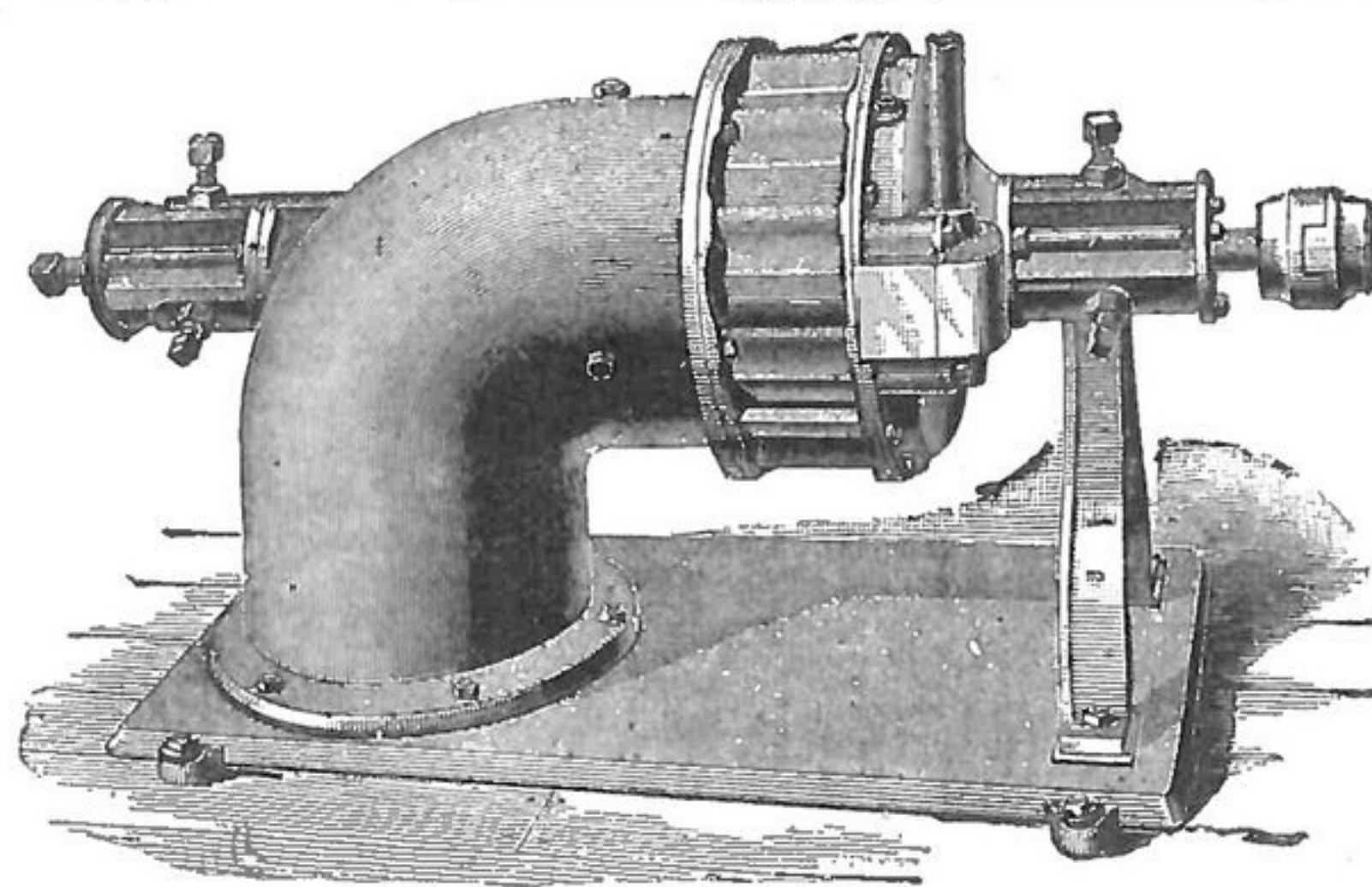
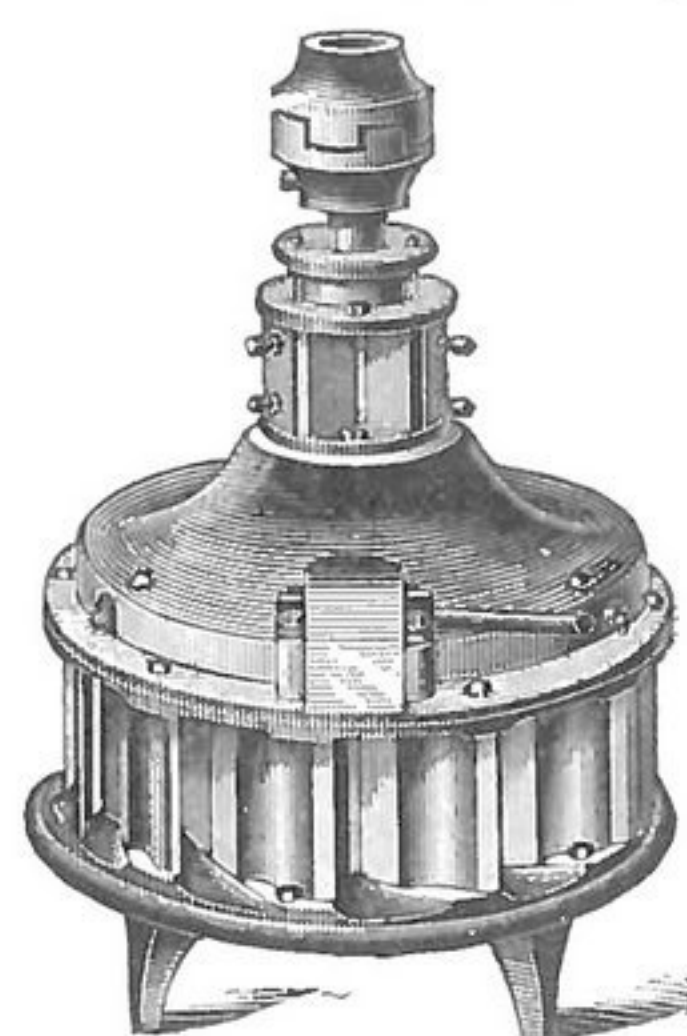
| SIZE. | PRICE. |
|-------------|--------|
| 4 inch..... | 7c |
| 5 "..... | 8c |
| 6 "..... | 10c |
| 8 "..... | 13c |
| 10 "..... | 16c |

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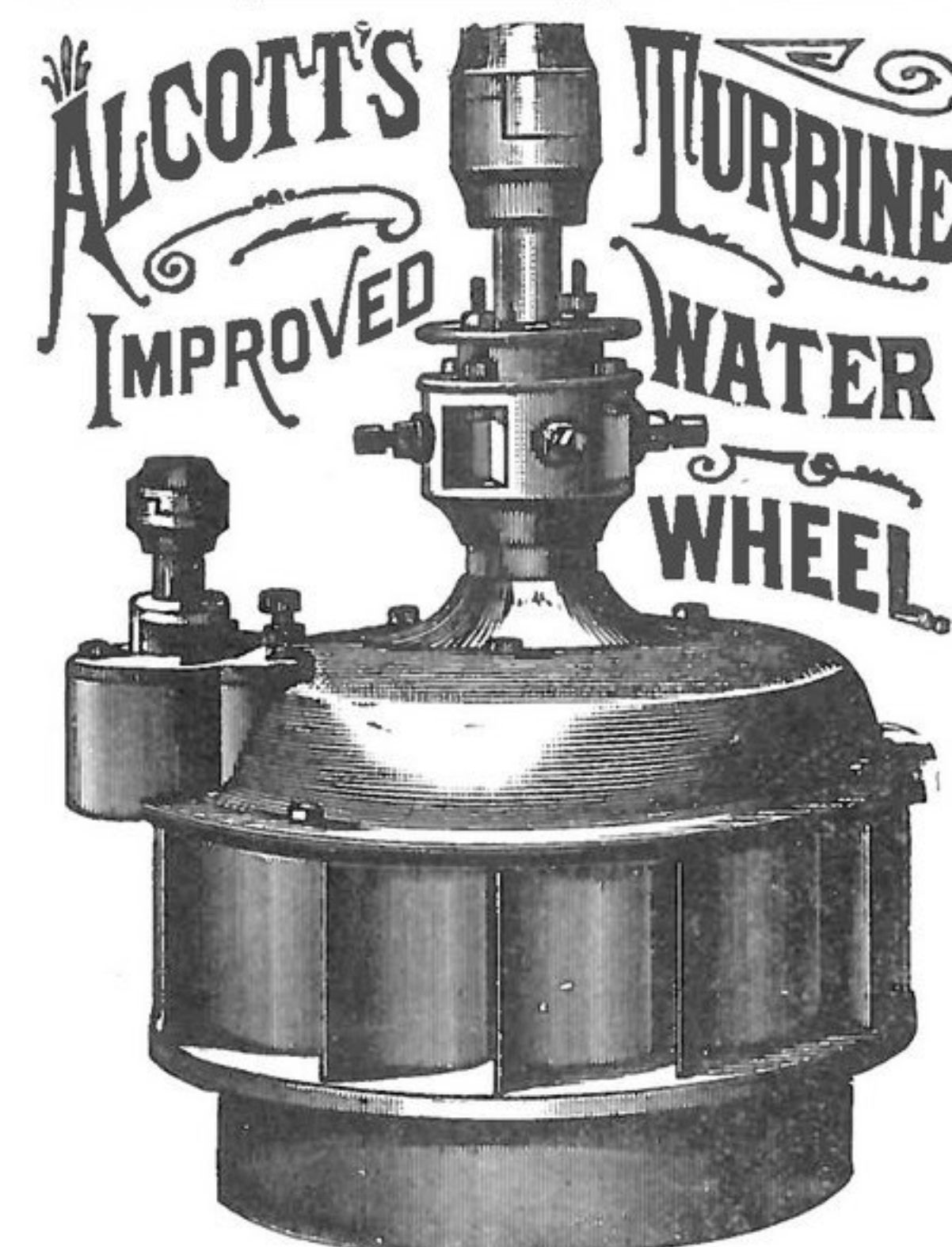
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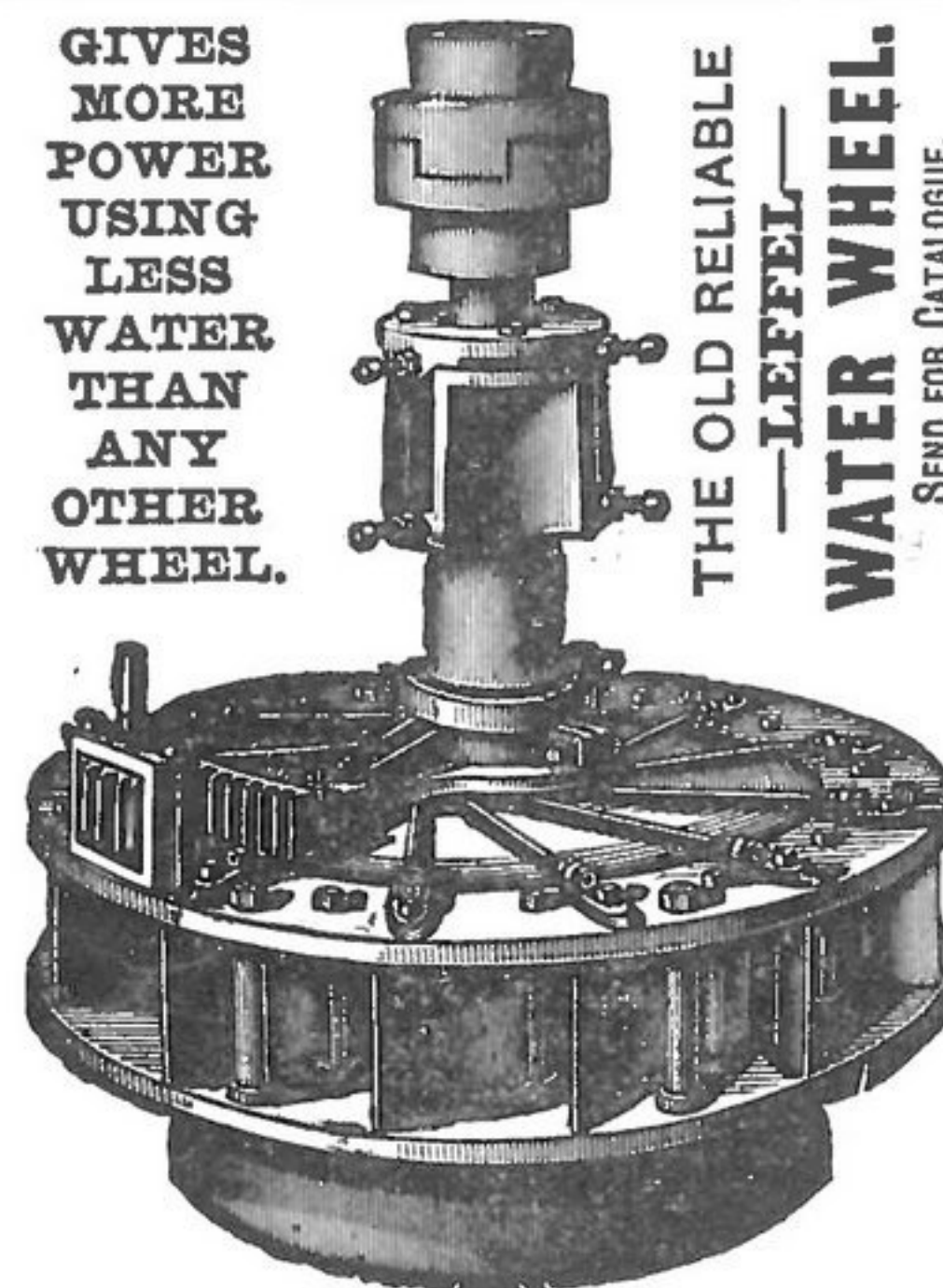
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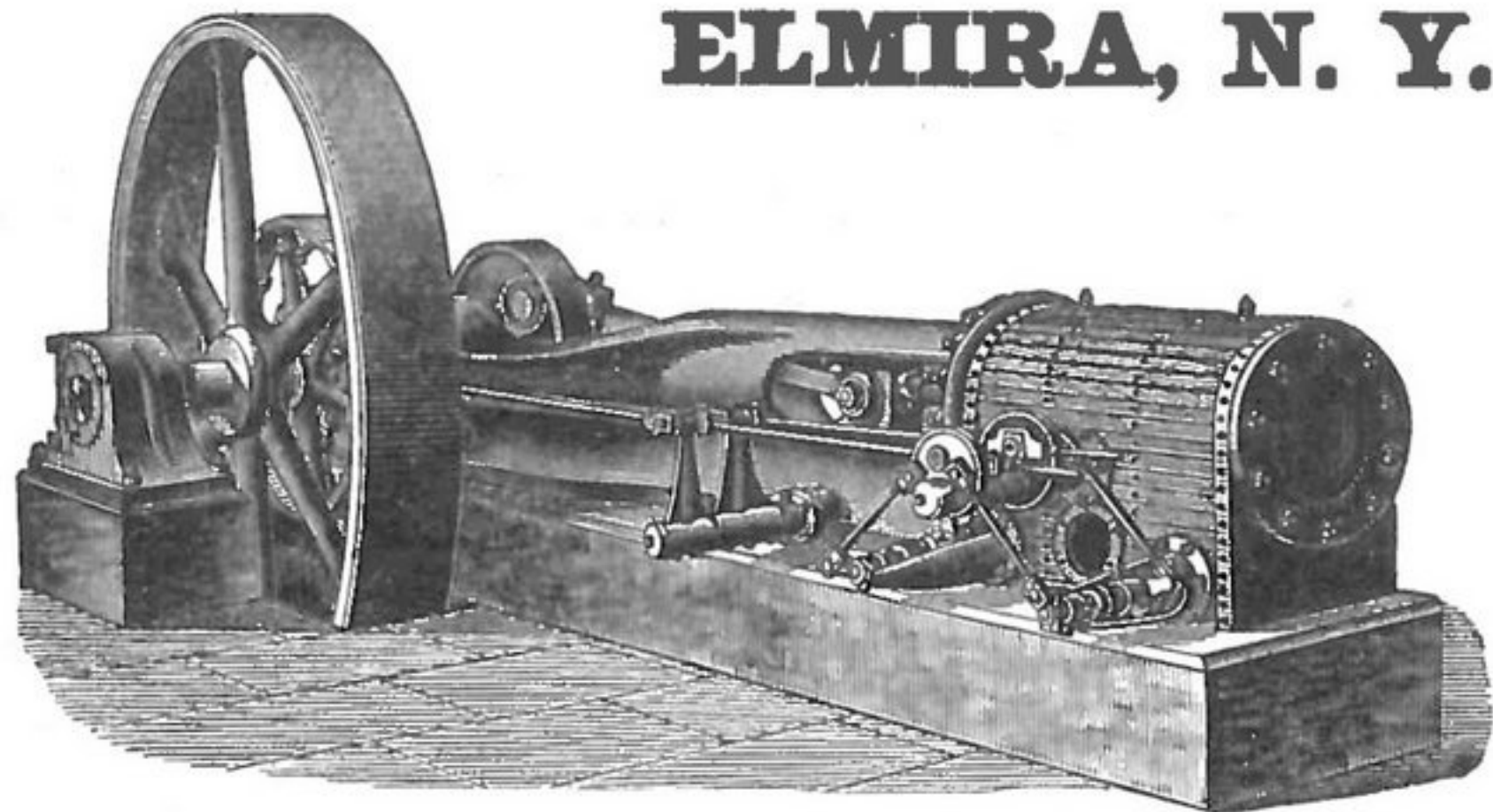


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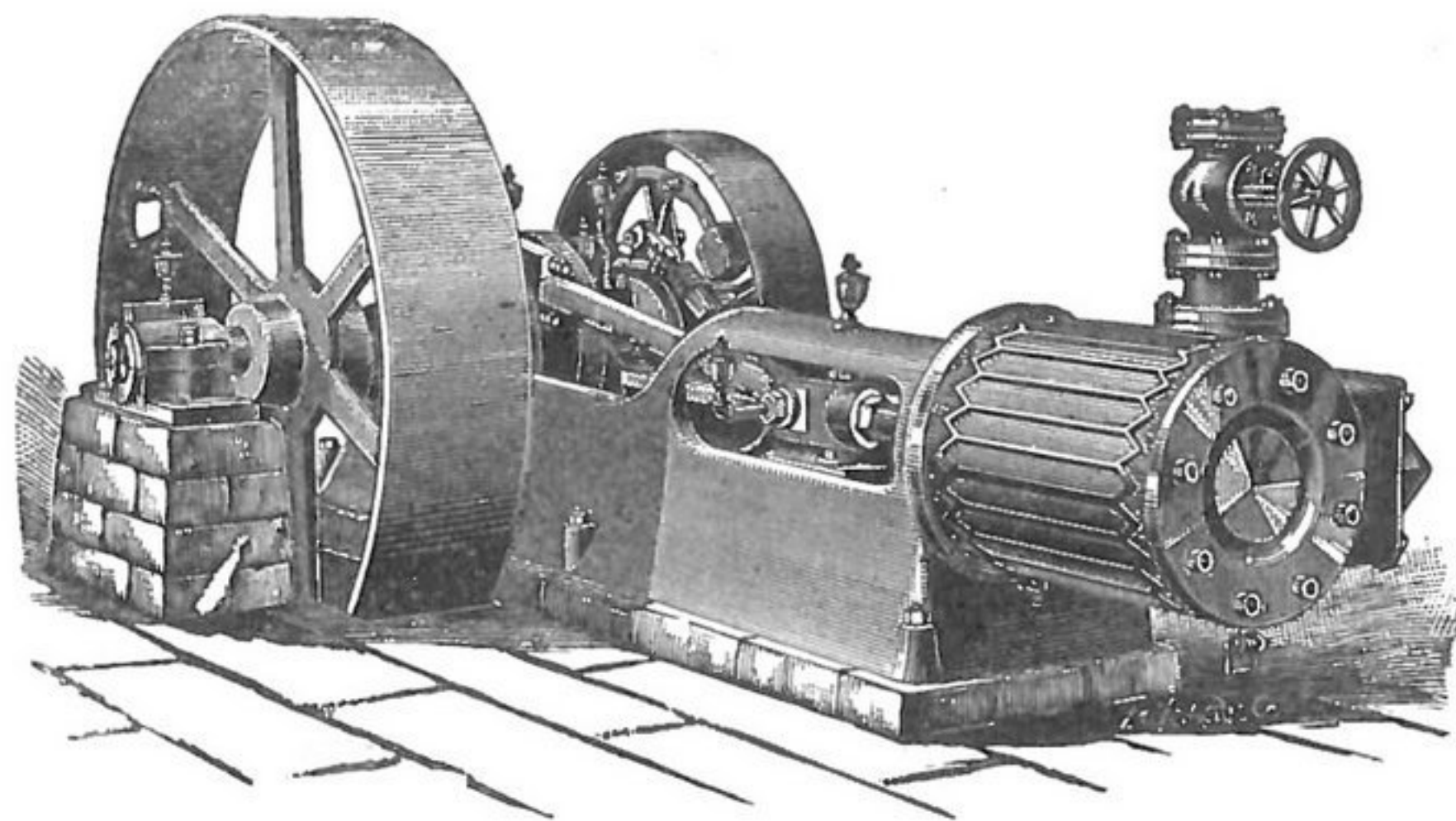
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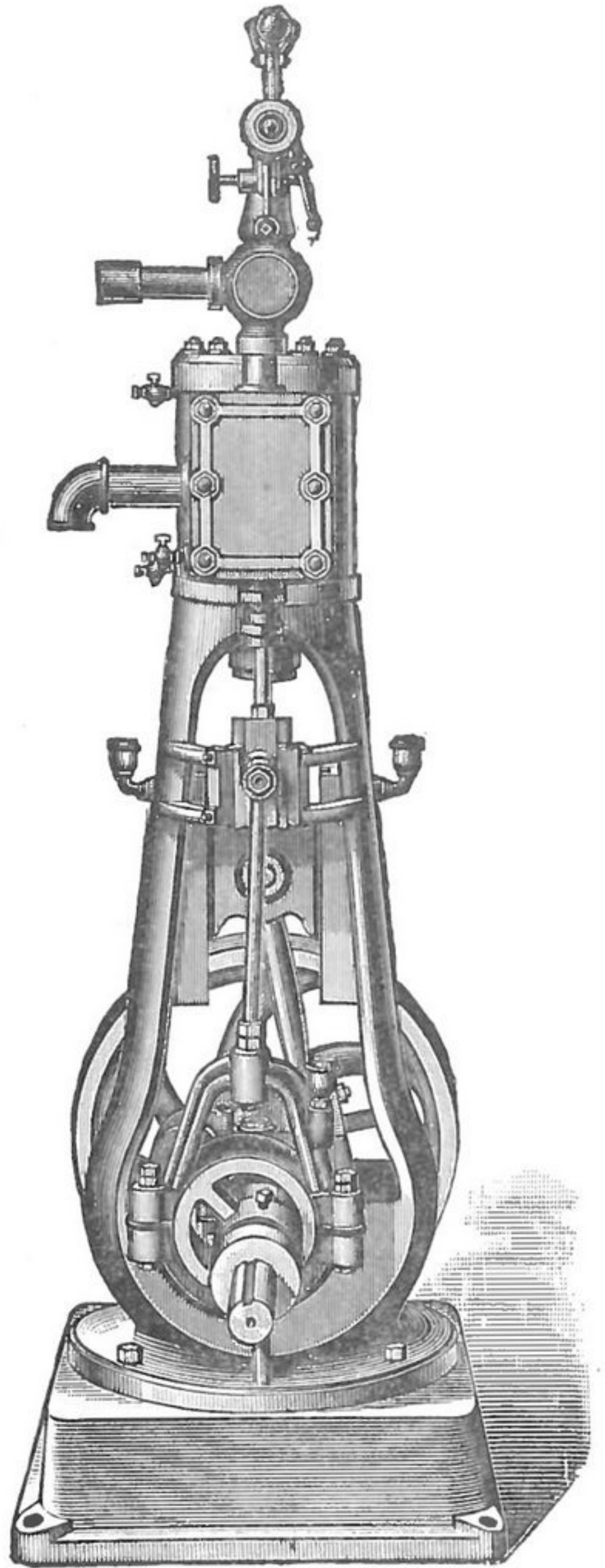
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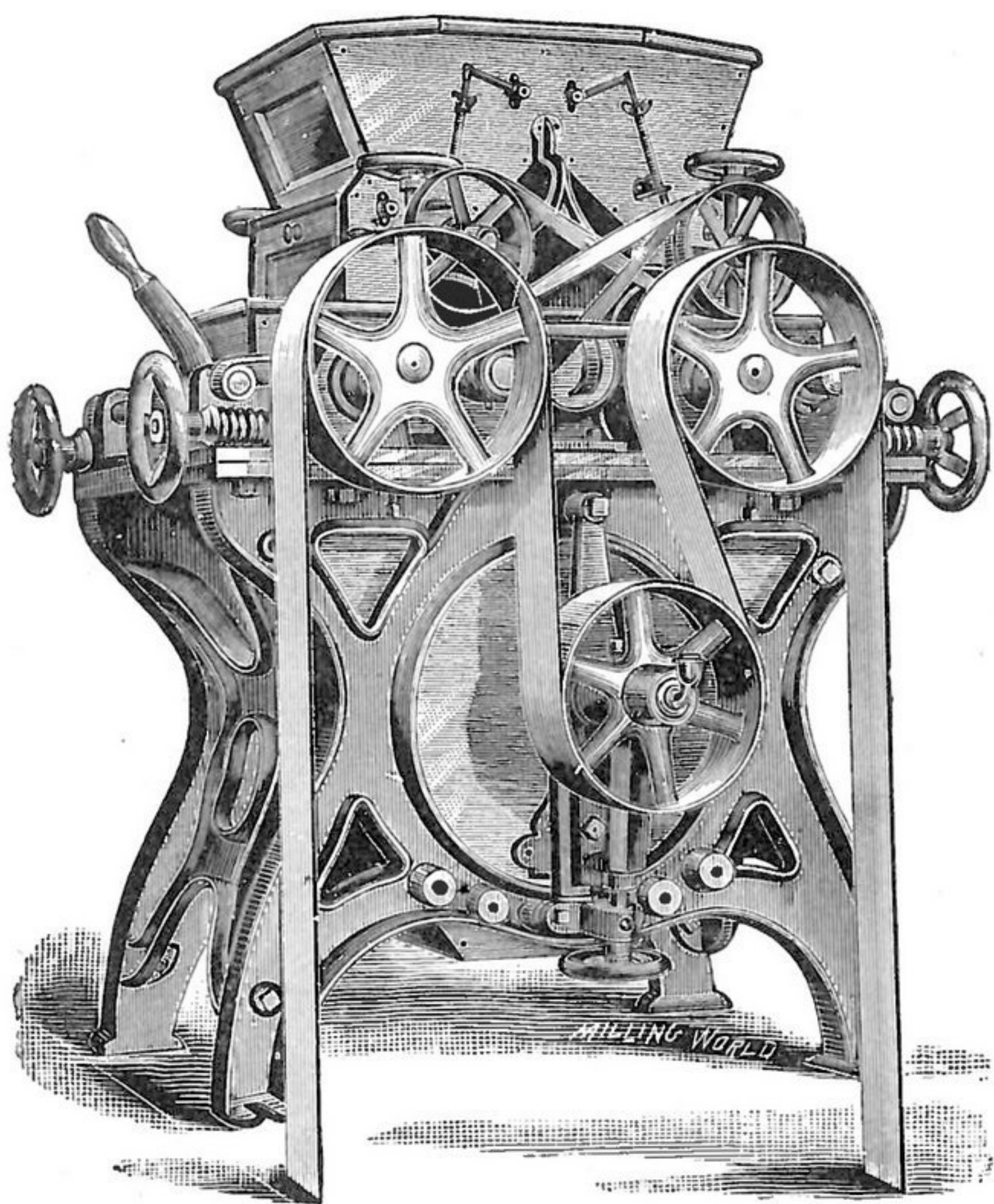


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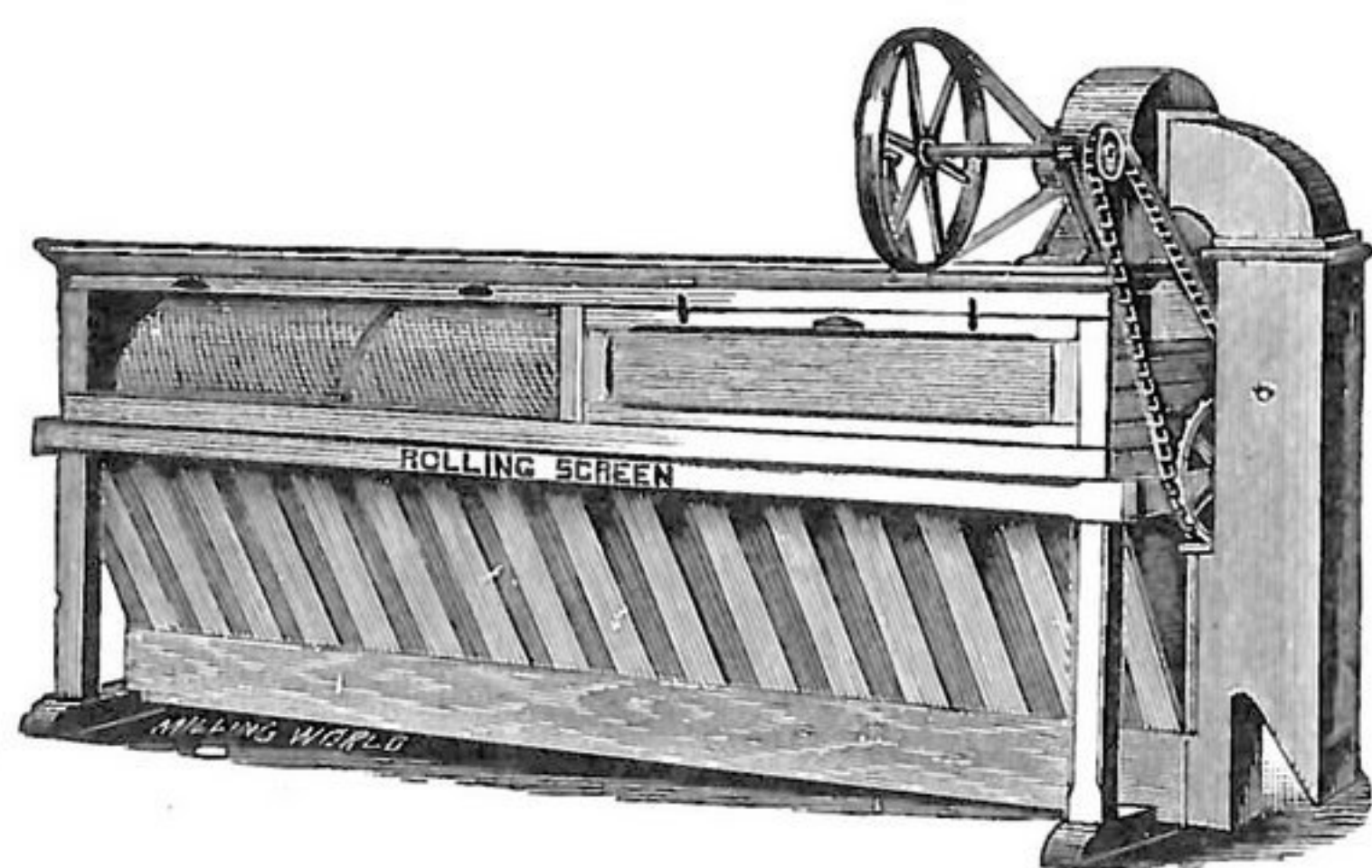
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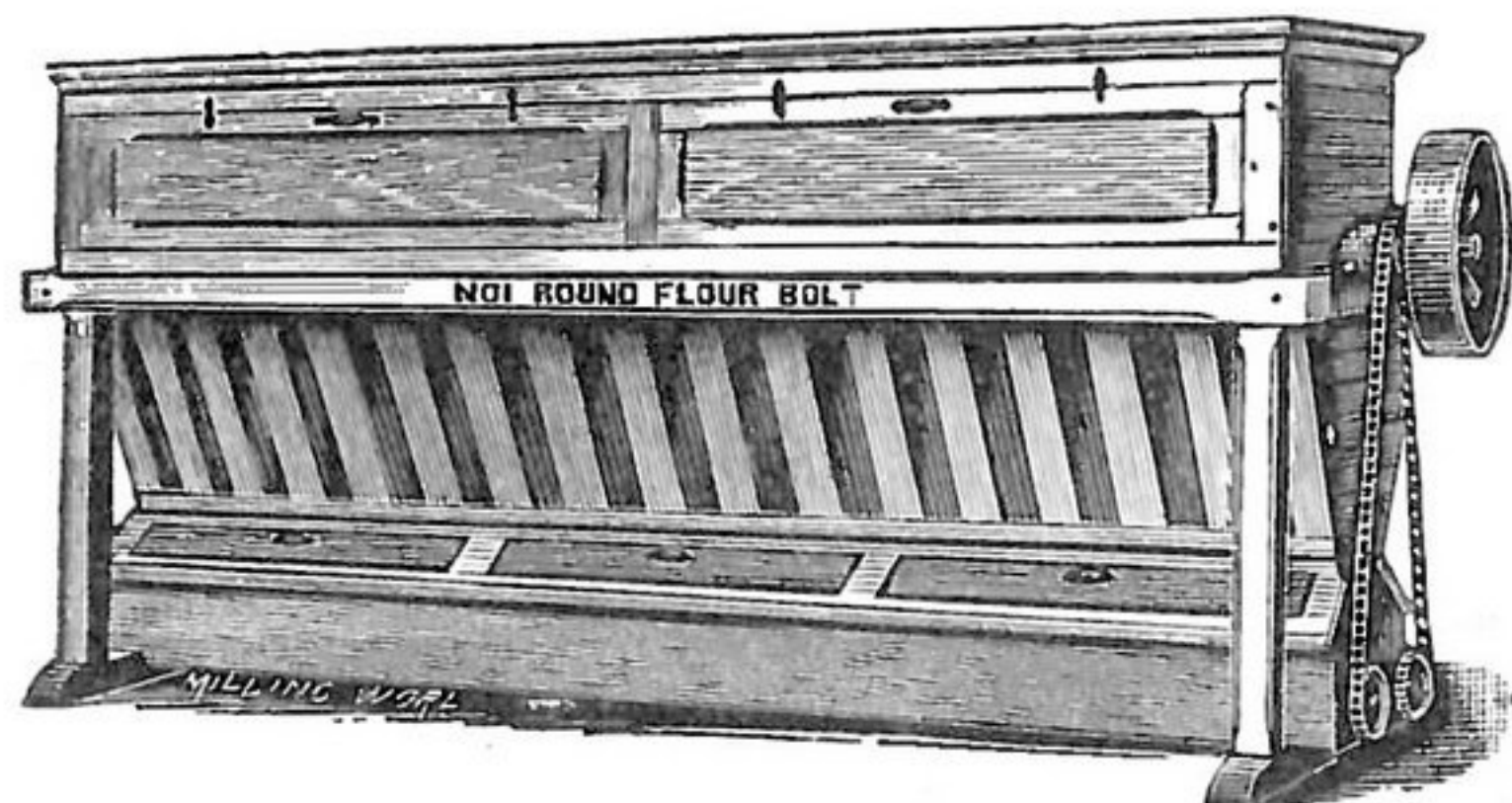
6x15 "

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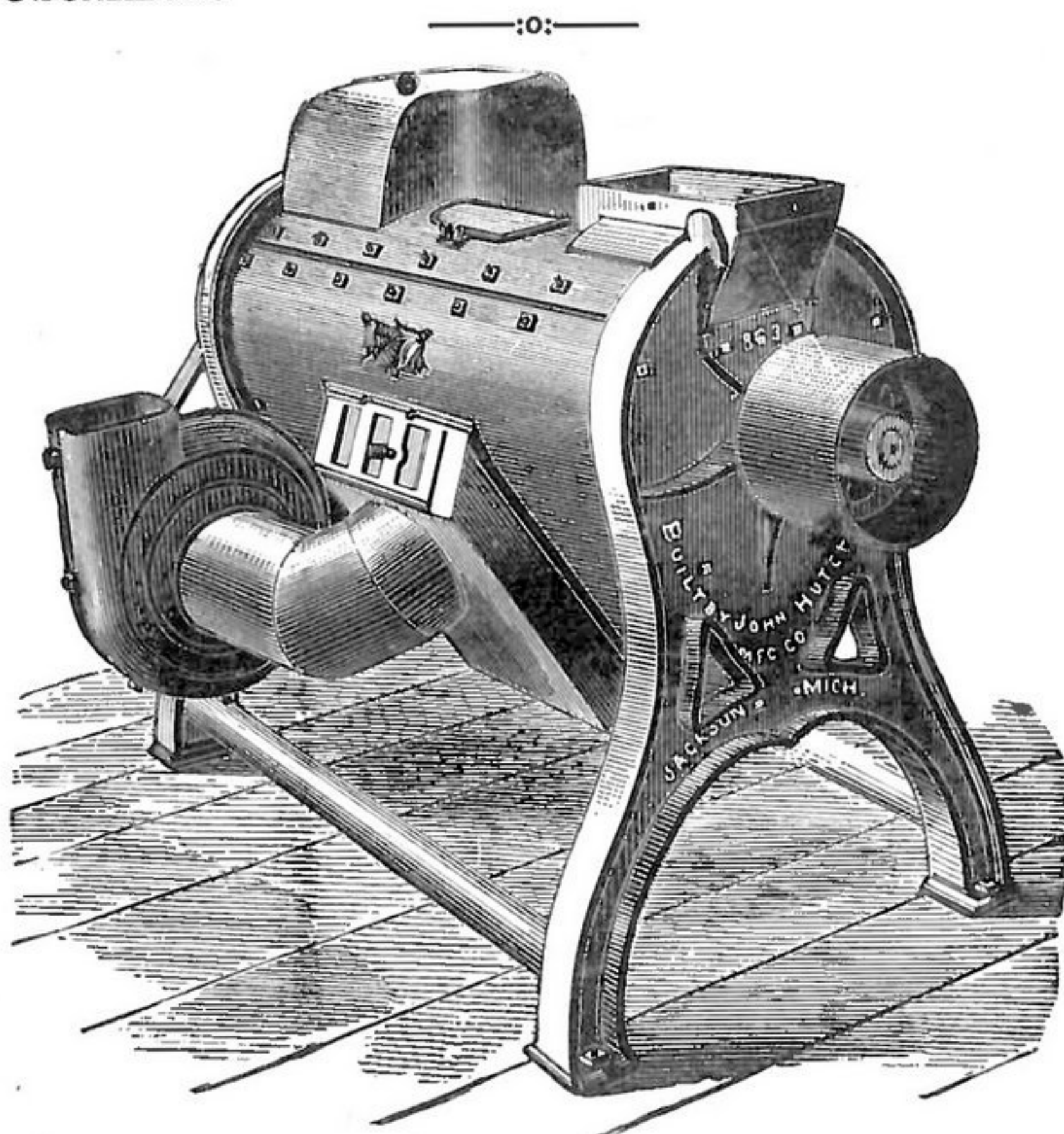


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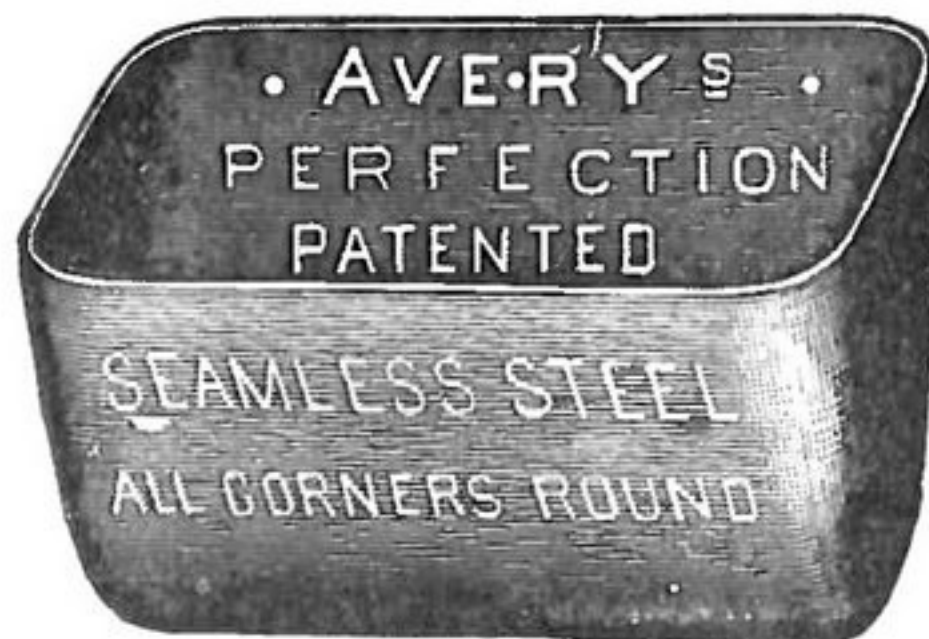


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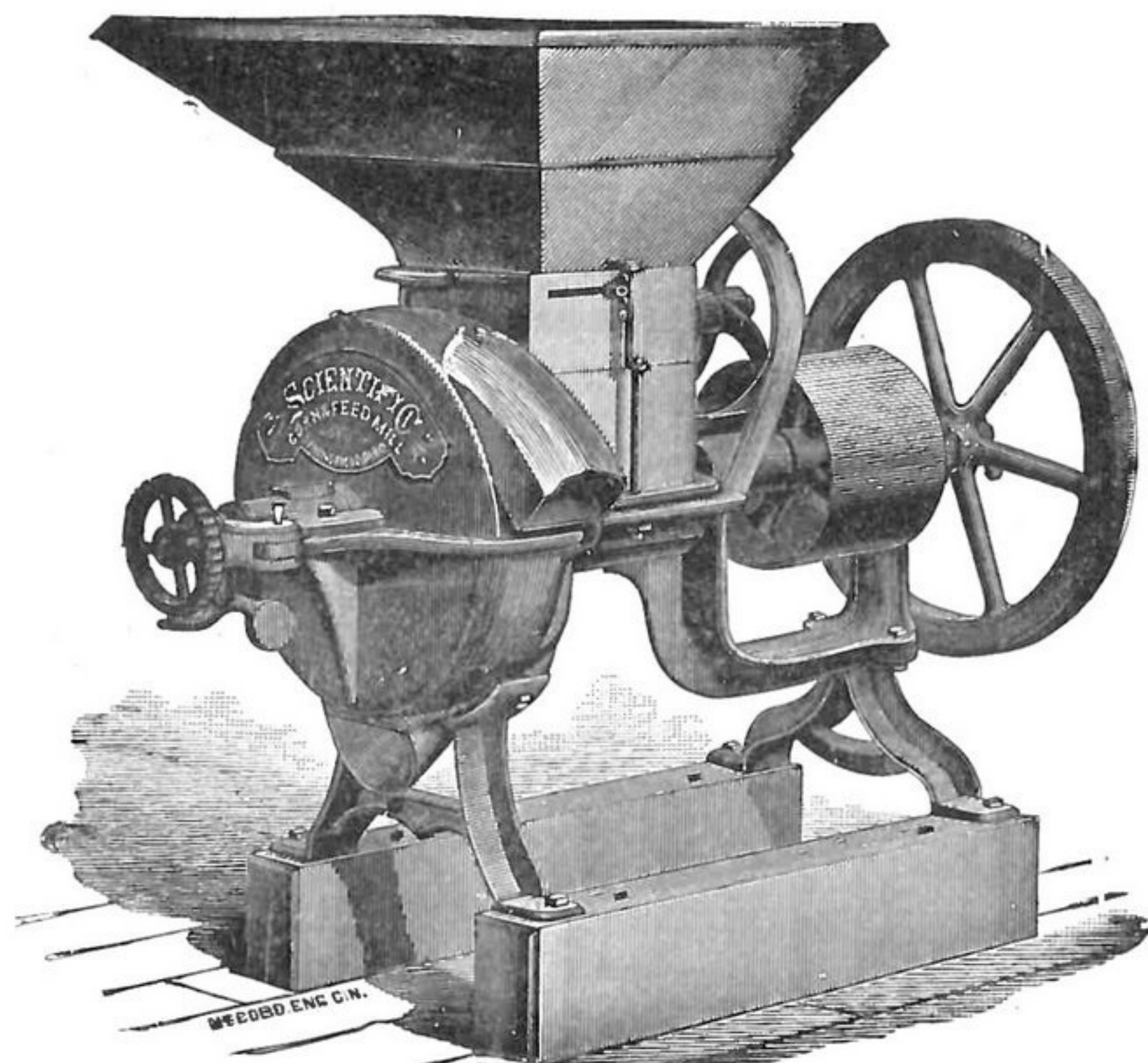
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